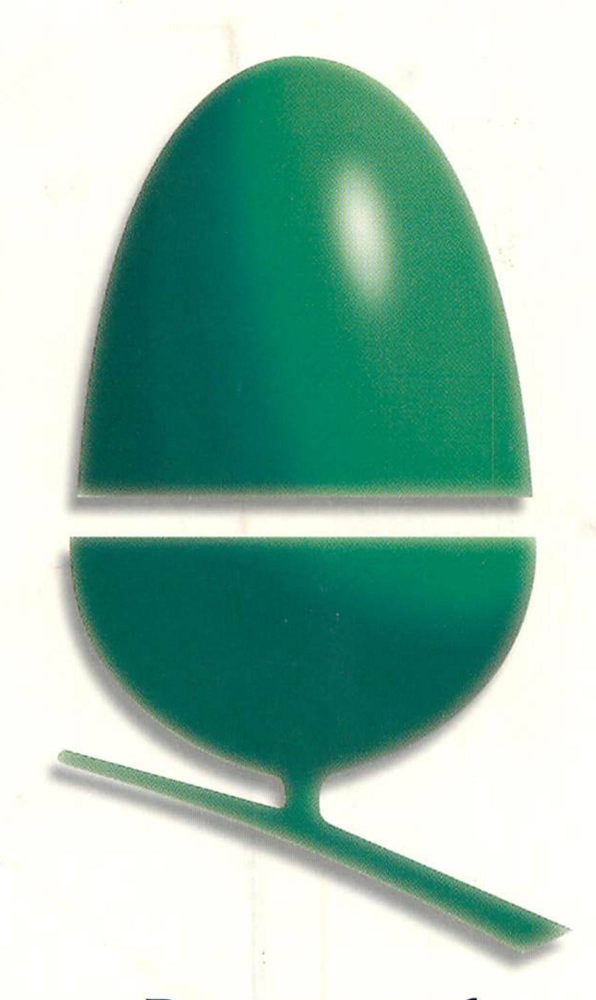
The best-selling Acorn magazine in the world

April 1998 Issue 193 £3.95 with 2 discs

ACORN USER

Essential for all users of 32-bit RISC OS computers



Power of individual thought







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Videodesk

Non-Linear Video Editing System.

Videodesk is a significant advance in video editing for Acorn machines which allows full-size, full-colour and full-motion video to be compressed to disc in real-time. The compressed video is edited frame accurately and output back to video for recording or display. Unlike tape-based editing systems there is no generation loss and edits can be played back instantly.

Key Features:

- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.



Videodesk is supplied complete with video editing software as standard, which is sophisticated, flexible and simple-to-use. Editing is done on a multi-track time-line with separate audio and video tracks. Effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Software is being continually developed and comprehensive titling software is now available at no extra cost. Titles are generated using the outline font system and can scroll, flash, fade and be overlayed onto the video or appear on their own. Titling is done digitally and does not require a Genlock.

RiscTV is supported for on-screen monitoring up to full-screen size and there is a specially priced bundle when purchased together with **Videodesk**. **RiscTV** and **Videodesk** are both available now. See below for more information about **RiscTV**.

Risc TV Desktop Television System.



Risc TV is a unique multimedia digitiser complete with built-in television tuner and audio processor. It allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

RiscTV has special hardware which is used to update the screen, so your computer runs at full speed and the real-time display is always true colour (24 bit) irrespective of screen mode. The display can also be scaled to any size or made full-screen.

- Suitable for A5000, A7000, and Risc PC.
- On-screen sizes of over 1024 x 768.
- Real-time scaling, filtering and control of contrast, brightness and saturation.
- Auxiliary inputs for Composite & S-Video.
- Low-cost Teletext option.
- Optional keying module allows **Risc TV**'s display to be obscured by other objects and still provide real-time overlay.
- Optional audio upgrade provides NICAM stereo audio, 16 bit sound sampling, audio mixing, plus Replay movie capture.



For the Complete Picture...

Irlam Instruments Ltd, Brunel Science Park, Brunel University, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ. Tel/Fax 01895 811401. Email: sales@irlam.co.uk
Website: www.irlam-instruments.co.uk

Please note: Videodesk requires a RISC PC, large fast hard disc and 8Mb RAM minimum. A StrongARM processor is recommended. Check suitability for your computer before ordering. 1 years guarantee. E & OE.
*To obtain good quality video requires storage of around 1.5Mb per second (5.4Gb per hour).



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Next month in **Acorn User**

What all the games fans have been waiting for – our *Doom* special. We're also comparing the News and Mail Readers, *Pluto* and *Messenger* and looking at a range of Psion software. Of course there'll be all the regulars and lots more.

Next issue on sale 16 April 1998



Intel assures StrongARM future

After several months of speculation regarding the future of StrongARM, Intel have announced that they are to continue manufacturing and developing StrongARM.

Uncertainty about the future of StrongARM arrived with the news late last year that Intel were to buy the chip-making business of Digital Equipment Corporation – who originally licensed and developed the high performance version of the ARM RISC chip. Acorn are extremely dependent on StrongARM and the news must come as a welcome relief.

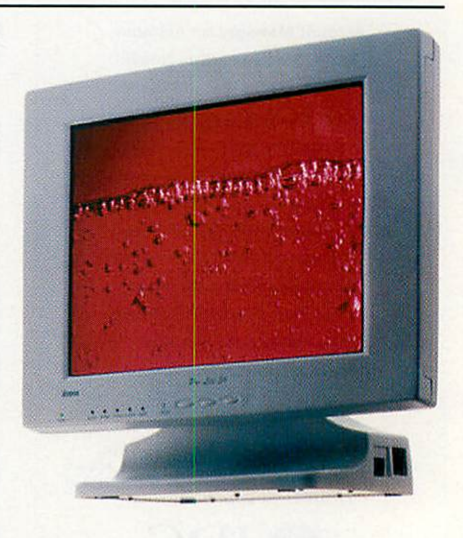
Ron Smith, vice president and general manager of Intel's Computer Enhancement Group said, "We believe the StrongARM processors have tremendous potential in the market. High performance, low-power microprocessors are essential to the future of a variety of portable devices and other consumer electronics applications and embedded applications." He continued: "Once we obtain regulatory approval, our plan is to continue to enhance and improve the product. We also plan to grow the customer base as well as provide support for existing customers."

Tim O'Donnell, president of ARM's North American Operations, said: "Intel's continued support of the StrongARM-based microprocessors will give designers a clear path to developing even more advanced devices based on ARM's high-performance cores. The value of our StrongARM technology is important for the future of emerging markets. We are committed to ensuring that this technology will continue to be made available to customers worldwide." Intel and ARM Ltd have also agreed a technology cross-licensing deal, however, they did not elaborate on the details. In some ways it could be said that Intel had little choice but to embrace their newly acquired StrongARM technology. Intel do not have a product of their own to compete with the low cost and high performance of a StrongARM, especially considering StrongARM's industry-leading power consumption economy. Intel Pentium chips of similar performance consume between 10 and 20 times more power than StrongARM and cost as much as three to five times more.

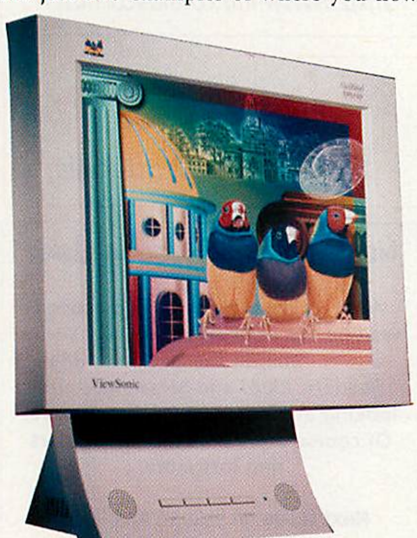
Intel do have a RISC processor which they market as an embedded controller, however, the Intel i960 family is widely considered as having less potential than StrongARM and some analysts now believe that Intel may abandon plans to develop the i960 platform for low power consumption applications which are ideal for StrongARM. Intel are not known for their technological modesty and the decision to adopt what is effectively an alien technology in preference to their own was described by one industry watcher as an emotional process for Intel to undergo.

Before Intel announced the deal with ARM Ltd, StrongARM protagonists had plenty of evidence to support their paranoia that StrongARM was under grave threat – it has been revealed that some 60 per cent of the StrongARM development team left to work outside of Intel after Digital's decision to sell their chip-making business to Intel. Now it appears that the way is clear for Intel to resume the process of enhancing and improving StrongARM, hopefully bring out faster devices later this year – conveniently in time for Acorn's launch of their new Risc PC.

LCD monitors inching towards affordability



You can tell when a new type of product is reaching maturity because you start to see it in places you wouldn't have previously expected. Banks and airline check-in desks are just two examples of where you now have and reasonable chance of seeing flat screen LCD monitors being used.



It's a good sign that they are becoming more affordable and that benefits are beginning to outweigh their price premium. Two well-known companies, iiyama and ViewSonic, have just launched cheaper LCD monitors for computer users. The latter have announced a 15 inch display with built-in stereo speakers – the VPA150.

ViewSonic say their new baby is a suitable alternative to a 17 inch conventional CRT monitor. According to the press release, sophisticated modulation of pixels and light means that the panel delivers 16.7 million colours with CRT-style clarity. Special filters and polarised glass deliver sharp pictures. A nice feature, though only supported as standard under Windows 95, is the ability to display the screen in either landscape or portrait mode as the screen can be rotated by 90 degrees. At the price of £1,499, the VPA150 is competitive for this type of monitor but still out of reach of most users.

iiyama can offer a slightly smaller alternative for £500 less. Their new ProLite 36 has a 14.1 inch LCD display and like the ViewSonic model is capable of displaying resolutions of up to 1024x768 pixels. £999 may still seem like an awful lot of money to spend on a computer monitor display, however, an equivalent product would have cost nearly three times this price just 18 months previously. May that welcome trend continue!

iiyama, tel: 01438 745482, fax: 01438 745483, ViewSonic, tel: 0800 833 648.



Acorn join forces

An exciting 1998 is promised for Acorn users with a number of alliances agreed between Acorn and key members of the Acorn industry. Alongside a newly implemented channel structure, agreements have been made with *Acorn User* to strengthen the overall marketplace.

The agreement includes availability of *Acorn User* in selected dealerships, to enable readers to catch up on new Acorn developments and promotions directly when collecting their monthly issue in store. In addition, Acorn and *Acorn User* will be combining effort on a number of future product promotions to support existing users and to encourage new people onto the platform.

At a recent dealer conference, the new channel structure was announced. The new agreement grants more power to key dealers to enable them to grow and drive the Acorn product range into areas that have been previously left untapped.

The above developments have been established to increase coverage of Acorn within the computing industry prior to the release of the long-awaited Risc PC II (RPCII).

Early start for Tesco Computers in Schools 98

It's the end of February as this column is being typed and the Tesco Computers for Schools scheme, in conjunction with Xemplar Education, has already been in full swing for several days. Normally, the scheme starts around Easter time, but this year there has been a strategic switch to the beginning of the year.

It's thought this is possibly because Tesco want to differentiate their scheme, which was the original after all, from copycat schemes being run by rival supermarkets and some high-street store groups. So, if you want to ensure your local schools benefit from free Acorn (and Apple) computers and accessories, start collecting those Tesco vouchers now!

StrongARM – your car?



Spotted the other day, yes, a car protected by a, wait for it... StrongArm car alarm. Whatever next?! We suggest they take out an advert in Acorn User – business would probably be very brisk!

Xemplar to feature in that dome?

Whether you like it or hate it, the Millennium Dome looks like it's here to stay. What's more, there seems to be a reasonable chance that if you visit the Millennium Dome you will possibly be able to see Acorn computers completing part of the education exhibit.

Tesco have revealed that they will be sponsoring part of the Millennium Dome project and Xemplar could well be involved through their links with Tesco. As part of their overall £6 million Information Communication Technology (ICT) investment in a national millennium scheme to promote education, called Tesco SchoolNet 2000, Tesco will participate in the Millennium Dome Learn Zone showcase.

One of the features of the Learn Zone exhibit is apparently called the Learning Curve. Acorn users readers with long memories may recall that the old Acorn education division used to sell an education bundle, called the Learning Curve, based on the A3000 Archimedes. Therefore, it is with little surprise that Tesco have revealed that Xemplar Education have been given the task of ensuring that Tesco SchoolNet 2000 meets the Government's objectives for the National Grid For Learning.

In effect Xemplar are Tesco's education consultancy, so it would be logical to assume that Xemplar will be involved in Tesco's contribution to the Millennium Dome project. Tesco chief executive, Terry Leahy, commented: "Tesco are committed to helping equip the nation's schools and pupils with the ICT skills and training for the inform- ation age. Over the last seven years Tesco computers for Schools initiative has injected £34 million of equipment into the nation's schools. Tesco SchoolNet 2000 is a natural progression and will be launched at the start of the new school year".

The project will last four school terms and will create 52 new jobs at Tesco. Eventually, contributions from participating schools will have the opportunity of been exhibited in the Millennium Dome as part of a high-tech educational IT experience. Some are calling it a Domesday Book for the 21st Century

Job vacancies at Argo

Argo Interactive Group plc have four full-time job vacancies. They require two experienced software engineers, a project manager and system administrator to work on international network computer and server related projects.

The work promises to involve Argo clients from all around the world and includes some travel. Candidates require C/C++, experience of PERL and Java, working knowledge of UNIX (Solaris 2.5+, [FreeINet]BSD), HTML and of course programming experience with RISC OS and ARM code. Various levels of seniority are available. Applications can be e-mailed to jobs@argonet.co.uk

Cryptic add-on

!AutoCrypt 0.90 is a utility for *ANT Internet Suite* users who wish to use the package's *PGP* (Pretty Good Privacy) security encryption produced by Tony Hopstaken. *AutoCrypt* can encrypt any selected outgoing mail messages in the queue, to clearsign any selected outgoing mail or news messages (with a PGP digital signature), or to decrypt all incoming PGP mail in the Inbox.

The latest release has a much improved manual, according to Tony, and more message types are recognised. There are numerous other improvements as well. *!AutoCrypt* 0.90 can be found on the Web at: http://web.bham.ac.uk/N.M.Queen/pgp/acorn.html

Verbose file names

Richard Atterer, who hails from Germany, has released the latest version of *raFS*, his long filename utility. Version 1.11 is now available from his home page on the Web at http://home.augsburg.baynet.de/richard.atterer/ and it's on this month's cover disc.

raFS allows you to have filenames of more than 10 characters in length, disc names of up to 63 characters, and no limit for the maximum number of files that can be stored in a directory. The latest version fixes several major bugs, one of which is potentially data-threatening, so Richard strongly encourages all users of *raFS* to upgrade to V1.11 immediately.



DVD RAM for £300?

Hitachi have laid claim to being the first to ship a DVD RAM drive. The GF-1000 drive family is expected to sell for around £300 and will accept single-sided 2.3Gb or double-sided 4.6Gb 5.25 inch DVD re-writable discs. As the DVD RAM standard dictates, the GF-1000 will also be able to accept ordinary audio CDs and CD-ROMs as well as DVD ROM discs.

When reading CD-ROMs, the GF-1000 is rated as an 8X CD-ROM drive. Nicholas Sundby, optical storage product manager at Hitachi Europe Ltd, commented: "Storage is cheap at around one cent per megabyte, but the key difference between this drive and other forms of low-cost removable storage is that it opens up access to the new world of DVD software that we expect to substantially change the PC landscape over the next few years."

The first drive to be shipped by Hitachi is the SCSI-2 interfaced GF-1050. This will be followed by an IDE interface version, the GF-1000, in June. Hitachi says the GF-1000 series can read CD-R and CD-RW re-writable CDs, but it cannot record onto these discs. News that DVD is now entering the re-recordable market is important for those who are considering the purchase of a recordable CD-ROM drive now.

It really does seem sensible, if possible, to wait and see if promises of imminent delivery of DVD RAM turn out to be true. It is unlikely that ordinary recordable CD will be killed off immediately by DVD RAM because, for the time being, the ordinary 650 megabyte CD format is actually much more useful than DVD RAM. Where DVD RAM really scores is as a convenient hard disc back-up medium and also for authoring digital video movies where un-compressed digital video data can quickly swamp a 650 megabyte CD. Eventually, the industry hopes to make available a wide range of off-the-shelf DVD video titles. Many expect DVD to eventually replace the ageing VHS video tape format.



Meanwhile, Hitachi have launched their own 32X CD-ROM drive. The CDR-8430 '32maX' operates between a minimum 14X transfer rate to a maximum of 32X depending on where the laser pickup happens to lie across the width of the CD surface. In other words, this is another CAV or constant angular velocity drive, spinning the CD at a constant rate.

You might think that speeding the CD up in order to maintain a 32X data read speed even when the head is at the innermost section of the CD surface would result in better overall performance, however the CD would have to be spun so fast that reliability problems could become a problem and synchronising the speed of the CD's rotation and the positioning of the pickup would become tricky task on a variable speed drive. It also keeps costs down – like other 32X drives entering the market now, the new Hitachi will sell for comfortably under £100.

Acorn releases revised WIMP spec

Acorn have revealed details of modifications to the RISC OS WIMP (windows icons mouse pointer – or graphical user interface) which are currently being beta-tested. Two versions of the WIMP are being examined; 3.97 and 3.98. Main new features include: nested windows, iconbar auto-fronting, iconbar scroll regulation and acceleration, 24-bit icon colour specification, border-less windows, new filter types, redraw optimisation, bug fixes and other optimisations.

A major addition in the new WIMP is the introduction of so-called 'child' windows which are now supported. These are windows linked to and only displayed within their parent. This sounds rather similar to the way Microsoft Windows originally implemented their windowing strategy, though they have since adopted more of a RISC OS floating windows style as well.

Child windows should reduce clutter on the desktop – an accepted problem with the current RISC OS WIMP, though it doesn't restrict the windowing concept as it did in old versions of Microsoft Windows. A nice touch is that child windows are dynamically associated with their parent windows, so when a parent window is moved, scrolled or resized, any related changes to child windows are dealt with automatically by the WIMP.

Child windows can also change parents! Nested windows are a powerful addition to the RISC OS WIMP, but also a potential hazard if applications implement them badly. Acorn actively encourages programmers to study the new WIMP specification before implementing the new features. An online briefing document is on the Web at: http://www.acorn.com/browser/nested_wimp/funcspec.html

The MENCAP shuffle

Steve Turnbull, *Acorn User's* illustrious editor, was on his way to the Middle East as this column was being prepared. As regular readers will know, Steve has bravely taken on the task of participating in a sponsored charity bike ride on behalf of the MENCAP charity. This was originally scheduled to take place in Egypt, was then switched to Israel because of terrorist issues and at the last minute switched back to Egypt (better to be shot by terrorists than poisoned by Iraqi anthrax, apparently).

Steve will be using an Acorn A4 portable, complete with solar battery charger designed and made by *AU* columnist Mike Cook, to record a diary of his torture, er, trip.

Steve could still do with some extra pledges (Acorn have sponsored him generously, for example). For more information on the ride, have a look on the Web at http://www.cix.co.uk/~turnbull/



Phoebe preview at Wakefield

Acorn Computers, in association with the Wakefield Acorn Computer (User) Group, are delighted to announce that the Wakefield Acorn Spring Show on the weekend of 16/17 May will present the first preview for Clan members of the exciting new Acorn Workstation codenamed "Phoebe" (aka RiscPC II).

In addition to displaying the long-awaited machine, Acorn will be hosting a special Preview Room, where some of the new workstations will be provided for visitors to experience this exciting new product. Pricing and the official name of the new workstation will be disclosed to Clan members at the show, while Exhibiting dealers will be able to accept orders for early delivery.

Dealers currently attending the show are: Beebug, Castle Technology, CJE Micros, Cannon Computers, CTA Direct, Desktop Projects, Davyn Computer Services, Norwich Computer Services, Pineapple Software and Uniqueway.

The Wakefield Acorn Spring Show will be held at the Thornes Park Athletics Stadium only half a mile from the City Centre. Opening times are: Sat 16 May – 10 am to 5.30 pm, Sun 17 May - 10 am to 4.30 pm. Ticket prices are – in advance Adult £2.50/Junior £1.50 and on the day Adult £3/Junior £2. Advance tickets can be ordered from: WACG Show98, 95 Cumbrian Way, Lupset Park, Wakefield, West Yorks, WF2 8JT. Cheques/Postal Orders to be made payable to "WACG SHOW" please.

Visit the Show website for all the latest news: http://www.cybervillage.co.uk/acorn/wakefield/show98.html

For further information contact either Chris Hughes on 01924-379-778 or show98@cumbrian.demon.co.uk or Mike Wilson on 0113-253 3722 or Show98@barc.demon.co.uk

VLSI ARMs itself for digital TV

VLSI Technology, the third minority shareholder in ARM Ltd, have announced a new set of chips for digital TV set top boxes. Optimistic estimates suggest as many as 1.5 million digital TV boxes will be sold throughout Europe by the end of this year. VLSI's "Vista" chip family uses an ARM RISC core.

"The Vista product line forms a complete, customisable three-chip signal path for digital cable converter systems. The new chip specifically targets the European market, where digital cable systems are set to come on stream rapidly in the 1998-1999 time frame," explained David Tahmassebi, VSLI product marketing manager.

Dataquest estimates digital television will reach more than 30 million homes around the world by 2001, up from five million in 1999. Acorn took a strategic decision not to enter the digital TV market when they formed their, now-defunct, Online Media division four years ago. Instead, they took the more risky option to develop set top boxes for client/server-based broad band interactive TV which has so far failed to take off.

Acorn admit that digital broadcast TV will now have to form part of their future strategy. Digital TV broadcasts in the UK are scheduled to start this summer. Eventually the government will force all commercial broadcasting to be digital, in order to re-use the frequencies now used by analogue TV. You will be using digital TV sooner or later. It will be interesting see if Acorn compete with the VLSI or whether they will adopt VLSI technology in the digital TV arena.

Driven to distraction

What a good idea – a driving test theory testing program. Learner drivers take note: Room J Software have just released *Question Master – The Driving Test Theory*, a program to help you prepare for the exam on the big day when you hope to say goodbye to that pesky 'L' plate.

The program contains the entire 1997/98 question bank, used in the actual test. The user can browse through the questions and try to answer them – with or without the helpful explanations that are supplied with every question. There is a simulator mode which will pass or fail you according to your expertise. You can even design your own quizzes and multiple choice tests.

With each copy there is a voucher for a free upgrade to the 1998/99 question bank when this is released later this year. The price is £15 + £1.50 P&P. Site licences for driving schools are available. Look out for the demo version on the AU cover disc. Contact Room J Software at Appletree Cottage, Lower Polladras, Breage, Helston, Cornwall, TR13 9NX, tel: 01736 762541.

High resolution digital still cameras getting cheaper

Traditional rivals on the photographic film scene, Agfa and Kodak, have both recently announced new cheaper digital still cameras. Kodak's new DC200 costs just £449 + VAT and features a one million pixel image sensor. Based on the more expensive DC210 model, which was well received by reviewers, the DC200 makes do without a zoom lens and some other luxury features. It retains the ability to display stored image via a video lead, uses interchangeable memory cards and complies with the new FlashPix digital imaging standard.

The camera is also a TWAIN compatible device, so can be used as an image source by TWAIN-enabled image editing applications via its serial cable. Agfa's ePhoto 1280 is slightly more expensive at an RRP of £649 + VAT, but has a more ambitious split-body design compared to the conventional-looking Kodak and it also has a zoom lens. The ePhoto 1280 is also FlashPix compatible. Both cameras sport LCD viewing screens.

Cirrus Logic puts ARM technology close to their heart

ARM licensee, Cirrus Logic, are using ARM technology to produce their own highly integrated single-chip computer. The chip, called the CL-PS7500FE-56, will incorporate a 56MHz ARM RISC core, a memory controller and an interface for a 56Kbps modem.

Audio capabilities are built-in, but unlike Acorn's own ARM 7500 design, a video graphics controller is not. Java applet support and a CD-quality audio control are highlighted features, as is the chip's ability to share system memory, which eliminates the need for separate SRAM and Flash memory. The $28 chip should ship next year.



Causality and Simtec get together

...to form ChalTech. The two companies originate from the Acorn market and have now combined forces to emulate Acorn's strategy in exploring new challenges beyond the traditional Acorn sphere.

Causality have already made their mark in developing applications for NCs and porting operating systems, while Simtec are an established hardware company that, among other things, make memory modules and were responsible for designing a multi-processor upgrade board for Risc PCs.

The two companies explain that ChalTech enables their complimentary skills to be combined in order to create exciting new embedded and semi-embedded computer systems. Their first product is an ATX form-factor motherboard based on a StrongARM processor and is designed for use as a platform evaluation board.

For more information or enquiries, e-mail: sales@chaltech.com A detailed website is also available at http://www.chaltech.com

Free relational database add-on

Chris Ford has announced the availability of an applet simply called *!DBase* which provides an add-on relational database for *Ovation Pro*. An *Impression Publisher* version is also available. It can look up and combine information from various lists of names or products that you have in a spreadsheet or database program.

From the specifications we have seen, *DBase* looks quite a powerful little applet, though you are required to have a spreadsheet or database program which can export a list as a CSV file. *!DBase* works with *Ovation Pro* Version 2.48 or later. You can download *!DBase*, complete with a comprehensive manual, from http://sp50.sp.phy.cam.ac.uk/ E-mail Chris at cjbf@cam.ac.uk for details of the *Impression Publisher* version.

Product	New features/product details	Price	Contact
Secondary Curriculum Clip Art	* Triple format CD * Contains high quality images for use across a wide range of curriculum areas	£79.95 (ex VAT) includes a school site licence	Sherston Software Tel: 01666 840433
SC1swk & SC1Cswk II	* For the recording and processing of marks for science GCSE work (1998+)	£25	P Pibworth Tel: 01452 614428
Virtualise v1.11	* Task Swapping facility * An addition allowing you to swap a task to disc, saving memory * Reloads instantly by clicking on iconbar icon * Only for RISC OS 3.5 and above	£29.95 Upgrades to v1.11 – £10	Clares Micro Supplies Tel: 01606 48511
ANT Internet Suite 1.29 upgrade	* Almost every component of the Suite has been updated	Download from the ANT Web server or ring ANT sales for discs by post (£10 charge)	ANT Tel: 01223 567808 http://www.ant.co.uk/cgi-bin/get/upgrade
WebTool 1.10 upgrade		Download from ANT Web server	ANT Tel: 01223 567808 http://www.ant.co.uk/cgi-bin/get/webtool
Phantasm	* ArtWorks colour companion (See graphics page and Art for ArtWorks feature in this issue plus the Astute Graphics Web page)	Introductory offer price – £17.50	Astute Graphics Tel: 01989 567350 http://www.astutegrfx.demon.co.uk
QuizMaster	* Multimedia application for the creation of multiple-choice quiz games for testing knowledge of National Curriculum topics	£36.50 + VAT	Xavier Educational Software Ltd Tel: 01248 382616 http://xavier.bangor.ac.uk/quizmaster
WimpWorks v2	* New version of the intergrated development environment (IDE) which allows anyone with a simple knowledge of BBC BASIC to produce multitasking applications * Fully compatible with RISC OS 3.1 or above and requires only 1Mb RAM	Full version £35 Upgrade from v1 £10 Upgrade from WimpBasic, HelixBasic, Archway or WimpGen £15 Make cheques/PO payable to Andrew Flegg	Jaffa Software 14 Worthington Close, Macclesfield, SK11 9NS E-mail: jaffa@cryogen.com WWW: http://www.cryogen.com/jaffa/
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Dr Fonty	* Enthusiasts font editor * Allows the production of complete fonts from drawfiles and editing existing fonts	£31.50 inc UK p&p	iSV Products Tel: 01344 455769
Videodesk Software update	* New features including polyphonic audio, VITC timecode handling, standard EDL output, Replay capture and more effects * Titling software available * Demos of Videodesk can be arranged at Irlam premises	For current users update is free – return discs with SAE. Videodesk – £995 + VAT £100 discount if purchase RiscTV too (£249 +VAT)	Irlam Instruments Ltd Tel: 01895 811401 E-mail: videodesk@irlam.co.uk
Dazzle Plus (Enhanced version of Dazzle)	* New tools for this painting and drawing package for KS1,2 & 3 pupils include – realistic spray gun, clone brush for photo-retouching, selection of minature pics, configurable toolbar	£75 (single) £150 (site) Prices ex VAT Upgrades avail	SEMERC Tel: 0161-627 4469
Education Resources CD	* CD containing most things a school needs including clip art, over 300 progs and utils, hundreds of textfiles eg classic novels & much more	£16.50 or £79 for 10 copies incl VAT & UK carriage	APDL Tel: 0181 778 2659
Earth in Space	* CD containing lots of Astronomy related material incl. databases, images and movies * 80Mb data	£8.50 incl VAT	APDL Tel: 0181-778 2659
The Generation Collection CD	* Six popular games from Generation Design	£17.50 incl	APDL Tel: 0181-778 2659
New range of IDE interfaces	* Two main versions – ARCIN and A3IN (depending on model) * Both have up to four devices, two can be external drives * Drive partitioning supported * Come with CDFS and ATAPI CD driver software	ARCIN – £57 A3IN – £67 (ANd £6 extra for User Port version instead of CD option)	APDL Tel: 0181-778 2659

Phantasm pheedback

Astute Graphics reports that following the recent launch of their *Phantasm ArtWorks* colour companion package at the Acorn SouthWest show, good feedback is being received from early adopters. Information about *Phantasm* is now available on the Astute Graphics website along with some *ArtWorks* example files for download. Point your browser at http://www.astutegrfx.demon.co.uk

Head-banging stuff

Skullsoft have some new low-cost software releases. The shareware game *Arya: The Dragon's Quest* has been made easier to download, the freeware utility *Amnesia Flags*, useful for users of Andy Southgate's *Gamesuite* modules, has been revamped, while the freeware programs *JPEGTrans*, *AddDos* and *WFRP* have been updated as well.

The main news comes in the form of a new shareware archiving program called *SkullCrusher*. This uses *Squash*, *LZH* and *Blowfish* modules. It provides compression/decompression, secure data encryption and file splitting and more. The current release is beta and requires the *WimpBasic* module which can also be downloaded from the Skullsoft website which is at: http://www.eganc.demon.co.uk/skullsoft/

Link that Series 5

Paul Vigay has announced what appears to be a proper release version of *ArcLink5*, for copying files between a Psion Series 5 and a RISC OS computer. Compared to previous versions which have been in circulation, a number of bugs have been fixed, the program has been speeded up and there are some new features to try out.

Paul's website is at http://www.vigay.mcmail.com and the software is available for download at http://www.interalpha.net/customer/pvigay/shareware.html

R-Comp phone number

The phone number for R-Comp Interactive was incorrect on last month's news pages. R-Comp can be contacted on 01925 755043. Apologies for any inconvenience caused.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

Showroom open Mon-Sat 10-18.00 hrs (All prices INCLUDE VAT) Carriage not included

CD-ROM Drives

Multi-Session, PhotoCD, CD-DA, White & Green Book compatible. SCSI drives require SCSI card withCDFS>2.20
Carriage: a=£2, b=£6, c=£8

Internal CD-ROM Drives

Panasonic 24xCD **ATAPI**	£70c
ATAPI Cable & Fitting Kit	£10a

Above drives are compatible with RiscPC Computers with RiscOS 3.60 or greater and all A7000 Computers.

Sony 2x CD **SCSI** 275ms	£60c
Pioneer 24x CD **SCSI** 130ms	£Callc

External CD-ROM Drives New

Panasonic 24xCD **ATAPI**	£160c
- suitable for Simtec IDE interface	
Sony 2x CD **SCSI** 275ms	£135c
Pioneer 24x CD **SCSI** 130ms	£Callc

TopicART CD £15a



This CD-ROM contains over 2000 ClipArt files, each in Draw, ArtWorks & CorelDraw3.0 EPS formats. The CD also includes high quality Replay Movies & other demos. Site Licence is included.

Hard Discs

New

Carr.: a=£2, b=£6, c=£8

NEW!! Simtec IDE Interface £69

New High performance IDE/ATAPI interface for all RiscOS Computers from A3000 to RiscPC (specify when ordering). Supports up to 4 IDE/ATAPI devices including ATAPI CD-ROM Drives.

3½" Hard Drives	IDE	SCSI
IBM 540Mb	-	£150b
Quantum 2.1Gb	£120b	£180b
Quantum 4.3 Gb	£170b	£240b
S/g Cheetah AV 4.5Gb	-	£520c
S/g Cheetah AV 9.1Gb	-	£830c

10,000rpm Cheetah drives are very suitable for VideoDesk.

Syquest Removable SCSI Drives

EZ230 Ext Drive	£120c	EZ230Mb Cartr.	£21a
EZ135Mb Cartr.	£20a	270Mb Cartridge	£40a

Hard Disc Interfaces/Accessories

IDE interface	£69b	50-50C SCSI Cble	£12a
Morley Uncached	£100b	25D-50C SCSI Cbl	£12a
Morley Cached	£135b	SCSI2-50C Cable	£15a
Cumana SCSI II	£155b	SCSI2-25D cable	£15a
		50IDC 4-way SCSI	£12a
External case/psu	£90c	50C Terminator	£12a
2nd IDE Drive Kit	£15a	50HPC Terminator	£15a

zip/jaz Drives

New

Now include our RiscOS JazZip tools (£17 if purchased separately)

- zip & jaz Drives work just like hard drives except they are removeable, giving instant access to files
- 100Mb discs for zip & 1Gb discs for jaz drives.
- Data transfer speeds up to 1Mb/s for zip drives & >5.5Mb/s for jaz drives - ideal for backup up.
- Each drive comes with 1 year warr. and a disc.
- SCSI drives require a SCSI card that is suitable for removeable devices.

Internal SCSI zip drive	**£120c**
External SCSI zip drive	**£120c**
External Parallel zip drive	**£120c**
- add £29 for RiscOS Parallel Driv'r	
Single 100Mb zip Cartridge	£13a
Pack of 6 zip Cartr. with caddy	£65b
Internal 1Gb jaz drive (3½")	**£240c**
External 1Gb jaz drive	**£320c**
Single 1Gb jaz cartridge	£70a

Carriage: a = £2, b = £6, c = £8, d = £10

JazZip Tools

New

The ultimate utility for SCSI or Parallel Iomega Zip/Jaz Drives

£17a Inc VAT

(free when purchased with a drive)

JazZip provides you with a complete set of RiscOS tools for Jaz/Zip drives which are equivalent to those provided with the PC DOS utilities that are provided with Iomega drives. Requires a driver for parallel use. Features include;

- Password protection of discs using the standard Iomega protection features which are compatible across RiscOS, PC and Mac platforms.
- Lock/Unlock zip/jaz discs without passwords.
- Lock/Unlock zip/jaz discs with passwords.
- Unlock zip/jaz discs until next ejected from drive.
- Low Level format zip/jaz discs.
- Initialise zip/jaz discs for RiscOS.
- Initialise zip/jaz discs for DOS/Windows.
- Unprotect the Tools disc provided with drives to allow them to be reformatted/Initialised for Acorn
- Compatible with IZipFS, Morley, Cumana, VTi, PowerTec SCSI. Other support to be verified.

THE 1997 ACORN USER AWARDS

This is to certify that

DESKTOP PROJECTS

has won first prize in the

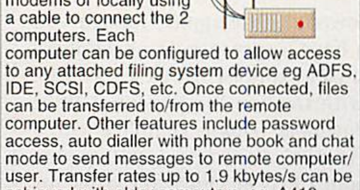
Acorn User reader award category of

BEST DEALER

Steve Turnbull (Editor)

QuickLynk (v1.04) £25a

With Local Cable 5m - £36a, 10m - £38a, 20m - £44a



QuickLynk allows you to access another remote RiscOS computer using the serial port via modems or locally using a cable to connect the 2 computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1.9 kbytes/s can be achieved with older computers, eg. A410, A3000, rising to 11.4 kbytes/s on the RiscPC range. The transfer rate is limited by the serial port speed. QuickLynk cannot at present be used directly from programs/command line. Requires RiscOS 3.10 or greater.

RiscOS Computer Systems

Reduced Prices

1yr warr. **Carriage included on computers.** All machines are single slice. Backplane fitted to 10M

233MHz StrongARM now fitted to all RiscPC Computers.

Computer Model with	14" (Samsung)	17"(8617)	No Monitor
A7000+ 8MHD1.2Gb	£925	£1225	£785
A7000+ 8MHD1.2Gb+24xCD	£995	£1295	£855
RiscPC StrongARM 4MHD1.2Gb	£1075	£1375	£935
RiscPC StrongARM 4MHD1.2Gb+24xCD	£1140	£1440	£1000
RiscPC StrongARM 34MHD1.7Gb+24xCD	£Call	£Call	£Call

The 34M RiscPC includes Acorn's J233 Internet software pack - (available ~April 98)

NEW!! RiscPC's are now available with 15" iiyama Monitors

Add £85 to 14" (Samsung) prices for iiyama MF-8515G 15" Monitor.

Add £45 to 17" prices for iiyama MT-9017T instead of MF-8617T.

20/20 Finance on Acorn computers - ~20% deposit & 20 interest free monthly payments. Loans from £700(min) - £3000. Subject to status.

Mail Order - 0161-474 0778 (All prices INCLUDE VAT) The lowest prices without compromise

RiscPC PC Cards

Acorn 586-100 (256kb)	£370c
-above price includes PC Pro	
PC Pro (without PCExchange)	£38a
Windows '95 CD (Full)	£90a

The above can be installed directly from CD without previously installing DOS or Windows.

RiscPC Upgrades

New

RiscOS 3.70 Upgrade	**£58a**
- Above is suitable for RiscPC's only.	
233MHz StrongARM	£275b
2nd Slice with PSU	£116c
2nd Slice without PSU	£90c
YES 16 bit Mozart Card	£70a

Memory

Following prices strictly whilst stocks last.

RiscPC/A7000 SIMMS

4Mb	£20a	8Mb	£25a
16Mb	£35a	32Mb	£65a

RiscPC VRAM

1Mb 2nd user	£40a	2Mb	£88a
1-2Mb u/g (exchange)			£65a

Call for details of memory for other models.

Monitors (Carriage £10)

Older computers will require an adaptor £12

Hi-Spec 14" Monitor £140
FST, 0.28" dp, 1024x768, 30-54kHz & pre-sets.

Ilyama MF-8515G 15" £225
High spec FST Tube with 0.28" dot pitch

Ilyama MF-8617E 17" £440
High spec FST Tube with 0.26" dot pitch

Ilyama MT-9017T 17" £485
Very High spec Diamondtron tube, 0.25" stripe

Printers (Carriage £8)

Canon BJC-4200	£135
Canon BJC-4300	£175
Canon BJC-4550 (A3)	£255
Canon BJC-4650 (A3)	£279
Canon BJC-5500 (A2)	£535
Canon BJC-620 (720dpi)	£220
BJC-7000 (1200x600dpi)	£295
Epson 400 (720dpi, 3ppm)	£159
Epson 600 (720dpi, 4ppm)	£209
Epson 800 (1440dpi, 7ppm)	£270
HP LaserJets 6P	£585

Add £47 to above printers for TurboDriver

Portable Computers

Carriage: a=£2, b=£6, c=£8

Pocket Book II (1Mb)	£245b
NEW Psion Series 5	
- includes PsiWin Link	
Psion 5 8Mb RAM	£480c
AutoRoute Express	**£50a**

- one of the best packages for the PB/3a

A-Link	£59a	Mac Serial Link	£50a
Parallel Link	£34a	PsiWin PC Link	£80b
3/3a Mains Adap.	£18a	5 Mains Adaptor	£22a

Hardware Upgrades

24i16 Card (1Mb)	£450b
DMI50 Dual Midi Card	£138b
DMI50XGS Midi/Synth	£335b
Dual Serial Card	£104b
FPA for 25MHz ARM3	£67a
Joystick I/F (Not RiscPC)	£30a
Logitech Mouse (Acorn)	£30a
Movie Magic (1 only)	£175b
- Includes two VideoCD films	
RiscTV Card (Irlam)	£285b
RiscTV Keying Module	£46a
RiscTV Teletext option	£45a
Scart Cable (9 or 15 pin)	£12a
Serial Upgrade (A3000)	£27a
100W Stereo Speakers	£25c
Videodesk (Irlam)	£1145b

Scanners (Carriage £8)

ScanLight Video 256	£175
- suitable for A3000-A4000	

Epson Colour Scanners

Include !TWAIN & ImageMaster for RiscOS. Bundles include CorelPaint & OCR software for PC's/PC Cards and approp PC interface card.

GTx-5000 Para bundle	£235
GTx-5500 SCSI bundle	£300
GTx-8500 Para bundle	£525
GTx-8500 SCSI bundle	£550
GTx-9500 Para bundle	£620
GTx-9500 SCSI bundle	£660

I³ Networking (Carr. £6)

A30X0 EtherLan 102	£130
Archi EtherLan 514	£130
RPC/A7k EtherLan 602	£110

Add £17 to above prices for Access+.

Modems (Carriage £8)

33.6 FLASH Sportster	£140
Flash upgradeable to 56kbs	

Modems come with a 9-25 PC wired cable. A3000/Archimedes req'r an Archi wired cable.

Sport'r Flash Message+	£170
ANT Internet Suite II	£110a
ArcFax	£33a
Dual Serial Card	£104b
9-25 Archi or PC Wired Modem Cable	£12ea.a
3-way Serial T-Switch (incl. comm. cable)	£32b

Printer Consumables

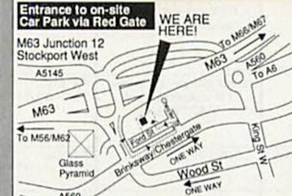
Carriage: £2 for Cartridges, £8 for Toner

BJ-10 (BC-01)	£18	BJ-200 (BC-02)	£19
BJ-210 (BC-05)	£28	BJ-240 (BC-06)	£Call
BJC-600 Series		BJ-300 (BJI-642)	£16
BJI-201HCbk Black	£10	**BJC-4000 Series**	
BJI-201bk Black	£6	BCI-21Bk Black	£8
BJI-201C/M/Y	£8 ea.	BCI-21C Colour	£16
BJC-800		BC-20 Fast Black	£24
BJI-643 Black	£18	BC-22 Photo Cart	£34
BJI-643C/M/Y	£23 ea.	BC-22 Photo Kit	£39
HP DeskJets-500 ser.		**HP DeskJets 600 ser.**	
Mono	£23	Mono	£25
Colour	£25	Colour	£27
Eps Stylus Black	£16	Eps Stylus II Black	£20
Eps Stylus Colour	£26	Eps Stylus II Col'r	£26
Laser Toner		C3903A (LJ5P)	£64
EP-L (LBP-4)	£64	HP92274A (LJ4L)	£60

Terms & Carriage

Carriage: To benefit personal callers to our showroom carriage is itemised seperately. The carriage indicated is for single items. Please call us for total carriage when ordering more than one item since it is not cumulative.
Terms: All prices include VAT except books. Carriage is not included unless otherwise stated. Carriage charges apply to mainland UK (excluding remote areas, Scottish Highlands, Chann Isles, IOM), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Restocking fee on non-faulty returns. Educ Inst official orders accepted. E&OE.

Where to Find Us



Books (No VAT)

Carriage: a=£2, b=£6, c=£8,

Acorn RISCOS3 PRM's	£99.95c
Acorn Volume 5a PRM	£29.75b
Acorn BBC Basic VI Guide	£19.95b
Acorn RiscPC Tech Ref Manual	£49.95c
ArtWorks Made Easy (Dabs)	£5.00a
Budget DTP (Dabs)	£5.00a
'C' A Dabhand Guide (Dabs)	£5.00b
RiscOS 3 First Steps (Dabs)	£5.00a
Wimp Programming for All (Beebug)	£10.95a

CD-ROM's

CD software for RiscOS

ArtWorks on CD (CC) (Carriage £6)	£105b
Childrens Micropedia (Kingfisher)	£72b
ClipArt CD 1/2 (CC)	£21a each
Dinosaurs (Microsoft)	£50a
Dune II (Eclipse)	£32a
Granny's Garden CD	£37a
Guardians of the Greenwood	£55a
Hutchinsons Encyclopedia 92 for RiscOS	£19a
Hutchinsons Encyclopedia 97 for PC only	£19a
Kiyeko	£36a
Musical Instruments (MS)	£50a
My 1st Incred. Amazing Dictionary (DK)	£39a
PB Bears Birthday Party	£39a
RiscDisc Vol 1 / 2 / 3 CD	£15a / £20a / £25a
Simon the Sorcerer CD	£32a
The Way Things Work (DK)	£50a
TopicArtCD (DTP)	£15a
Ultimate Human Body (DK) **Limited Offer**	£40a

Applications

Carriage: a=£2, b=£6, c=£8

Acorn C/C++ (Acorn)	£229c
Advantage (Longman)	£51a
ANT Internet Suite (ANT)	£110a
ArcFax (David Pilling)	£33a
ArtWorks (CC)	£105b
Card Shop (Clares)	£23a
Chameleon 2 (4Mation)	£39a
Compression (CC)	£31a
DataPower2 (IOTA)	£165b
DaVinci (Spex)	£78a
Disc Rescue 2 (Look)	£43a
Easy C++ (Beebug)	£112a
Eureka v3 (Longman)	£105b
FastSpool+ (WSS)	£17a
FireWorkz Pro (Colton)	£159b
Font Directory2 (Look)	£42a
Font FX 6 (DataStore)	£30a
Hatchback (4Mation)	£39a
HTML Edit 3 (R-Comp)	£47a
ImageFS2 (Alt Publ)	£43a
Image Outliner (IOTA)	£55a
Impression Style / Publisher	£83b / £136b
Impression Graphics Loaders (CC)	£39a
Impression Text Loaders (CC)	£39a
MacFS / MacFS Lite (CC)	£105a / £51a
OmniClient II (Acorn)	£85b
Ovation Pro	£175c
PC Pro (without PCExchange)	£38a
PC Pro (with PCExchange)	£47a
PC Sound Professional (R-Comp)	£28a
Personal Accounts (Apr)	£45a
PhotoDesk Light (Spacetech)	£129b
PhotoDesk2 (Spacetech)	£249b
Prophet (Apricote) **(One only)**	£140b
RiscCAD (Davyn)	£240c
S-Base2 Developer	£100c
Sibelius Junior	£55a
Sibelius 6 / 7Stud / 7	£110b / £445b / £939b
Sleuth2 (Beebug)	£105a
SparkFS (Pilling)	£24a
Speech 2! (Superior)	£24a
StrongGuard (ARMClub)	£24a
Studio24 Pro (Pineapple) **(One only)**	£105b
Textures Professional (R-Comp)	£19a
Touch Type (IOTA)	£42a
Top Model 2 (Spacetech)	£145a
TurboDrivers Canon/HP or Epson(CC)	£50b
Vector (4Mation)	£67a
Web Designers Toolkit (R-Comp)	£28a

Games (Carriage £2)

Alone in the Dark (Krisalis)	£32
Birds of War (4D) 2Mb	£30
Break 147/Superpool (4D)	£30
Carnage Inc (4D)	£16
Chocks Compendium (4D)	£30
Crystal Maze (Sher)	£28
Cyber Chess (4D)	£16
Doom Trilogy New!	**£33**
Drifter (4D)	£30
Dune II (floppy) (Eclipse)	£30
Empire Soccer (Maglm)	£24
E-Type Compend. (4D)	£19
E-Type 2 (4D)	£30
Exodus (Artex)	£25
Fire & Ice (Times Warner)	£23
Global Effect (Eclipse)	£28
GODS (Krisalis)	£10
Haunted House (4D) 2Mb	£23
Holed Out Compendium (4D)	£16
James Pond (Krisalis)	£10
Krisalis Collection	£28
Lotus Turbo Chall2 (Kris)	£26
Magic Pockets (Reneg)	£26
Play it again Sam 2/3	£24 each
Real McCoy 2/3/4/5 (4D)	£30 each
Repton 3/4 (Superior)	£23 each
Saloon Cars Deluxe (4D)	£30
Scrabble (US Gold)	£26
Simon the Sorcerer 2Mb	£27
Spobbleoid Fantasy (4D)	£27
Starfighter 3000 (Fednet)	£28
Stunt Racer 2000 (4D)	£30
Time Machine (4D)	£23
Virtual Golf (4D) 2Mb	£30
Wolfenstein 3D	**£15**

- Now compatible with RiscPC+StrongARM

Educational (Carr. £2)

10/10 Series £14 each
Early Essentials (over 7), English (6-16yrs), French (8-16yrs), Junior Essentials (5-11), Maths (Number) (6-16), Maths (Algebra) (6-16), Maths (Statistics) (6-16), Maths (Geom'y) (6-16), Spelling (over 9), Essential IT, Geog.,

Fun School 3 (under 5, 5-7, or over 7)	£22
Fun School 4 (under 5, 5-7, or over 7)	£22
Granny's Garden (floppy) (4M)	£26
Maths Circus (4Mation)	£28
Naughty Stories Volumes 1 or 2	£45 each
Playdays (Gamesware)	£24
Ridiculous Rhymes	£45
Rosie & JimTwin Pack	£18

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Unit 2A, Heapriding Business Park, Ford St, **STOCKPORT**, Cheshire. SK3 0BT. WWW: http://www.desktopp.demon.co.uk
Email: info@desktopp.demon.co.uk. Open Mon-Sat 10.00-18.00 hours.

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Fax: 0161-474 0781

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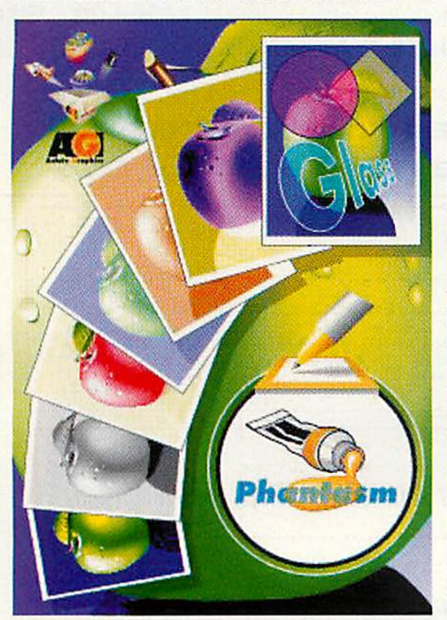
APR 98



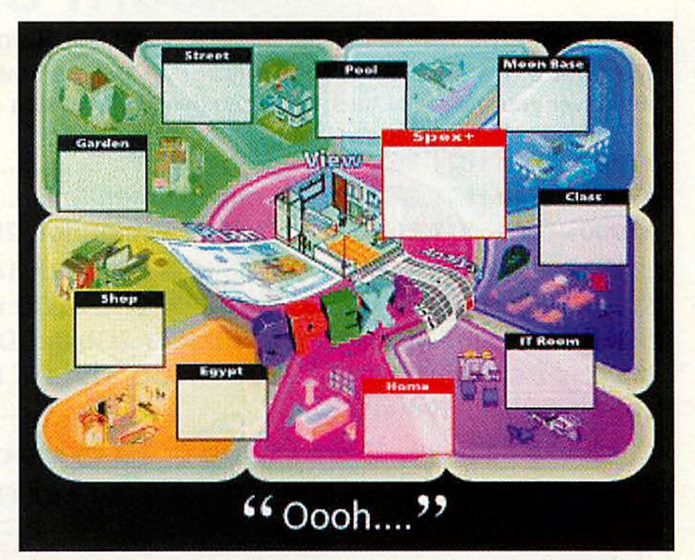
Phantastic artwork

Phantasm colour manipulation package is a breakthrough colour manipulation and processing package from Astute Graphics, that works in conjunction with the Computer Concepts' program *ArtWorks*.

Astute Graphics, who provide a professional graphics design service using Acorn hardware and *ArtWorks* as one of their favoured design tools, have benefited from a detailed knowledge of the capabilities and weaknesses of *ArtWorks*. *Phantasm* aims to comprehensively address *ArtWorks'* poor colour handling in the form of a standalone application that imports *ArtWorks* colour tables and exports them back into the source file after processing.



The screenshots have been taken directly from the Astute Graphics website which explains and visually demonstrates how the package can be used in six different ways to alter the colour characteristics of the graphics files (enabling conversion to monochrome or greyscale, lightness/contrast/saturation control for creating mock transparency effects, colour inversion, and colour masking). It also covers the three ways that the program can create colours and tables (including colour gradations, linear and non-linear, interpolating through two or even three colours) and the various ways that colours can be converted on saving (such as converting all colours to CMYK or Spot colours, which is especially useful for professional printing purposes).

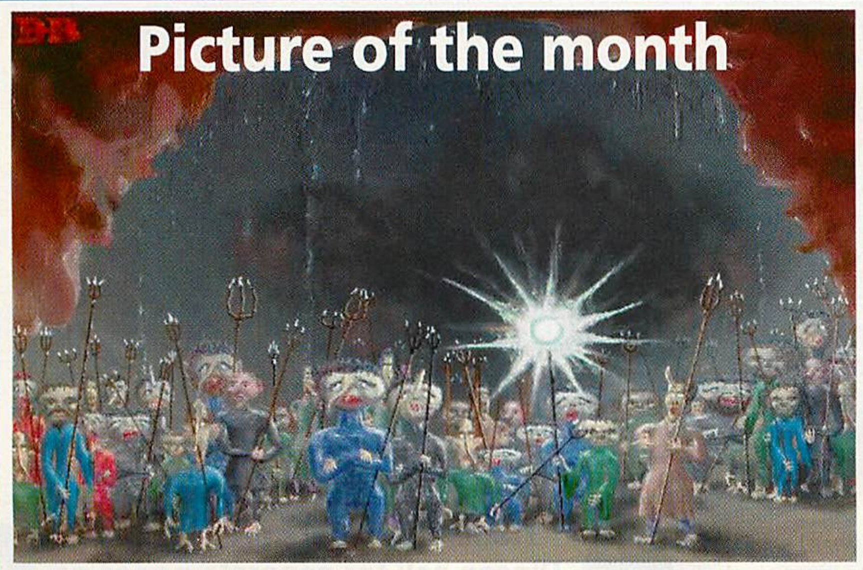


"Oooh...."

Astute Graphics have kindly offered future Pic of the Month winners a complimentary copy of the program (normally retails at £17.50), so the total worth of the prize is now worth nearly £40 including the cash.

Astute Graphics can be contacted on 01989-567350, or e-mail nick@astutegraphics.demon.co.uk. and the Web address is http://www.demon.astutegrfx.demon.co.uk

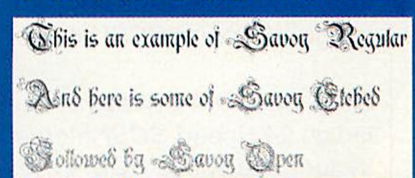
Picture of the month



This month's winner, Mr D H Billingham, a previous winner of this coveted award, has once again got his inspiration from a C.S. Lewis book called *The Silver Chair*. It was produced using *Photodesk* – the 'earthmen' were cut and pasted with masks from a separate canvas to the background. The figures were altered in size and colour before being pasted into the scene, which helped to add consistency to the crowd, even though each of the characters is individual and holds a different object and casts its own shadow.

Please keep your entries coming in and remember to include a letter detailing how you created your masterpiece. The Pic of the month prize now includes a free copy of the superb *ArtWorks* colour processing application, *Phantasm*, available from Astute Graphics whose contact information is provided in the article above.

Fabulous fonts



A beautifully designed font set called Savoy is available from The Datafile. The elaborate and ornate font is based on an 18th Century etching and includes five complete weights and one called 'frame' containing numerous border graphics of a similar style to compliment the lettering.

There are not many fonts available for the Acorn in this style so this has great potential in both desktop publishing and as stencils in bitmap packages. The fonts and frames will be perfect for producing convincing imagery of the period.

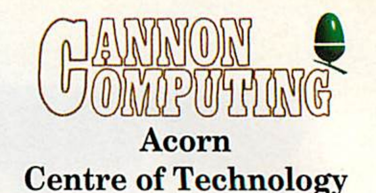
The Datafile
Tel: 01934 644046

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler, at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP,or by e-mail to augrafix@idg.co.uk



The names you can trust for all your computer requirements.



Acorn Centre of Technology

Acorn Computers

We supply the range of computers, A7000s, RiscPCs, Pocket Books and NetWork Computers (NCs).
We offer *extra discounts for Education* - Call us now for the most competitive value, high specification quote.
Whatever your needs or budget we can help with Leasing / HP / Educational accounts / Cheques or Credit & Debit cards.

		(Inc VAT)
A7000+ 8Mb HD1.2Gb with 14" monitor	905.00	1063.38
A7000+ 8Mb HD1.2Gb 8xCD with 14" monitor	947.55	1113.37
A7000+ 8Mb HD1.2Gb 24xCD with 14" monitor, 200 watt speakers & 2 Anglia CDs	999.00	1173.83
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Cumana 'CDBlaze' Internal SCSI CD-R drive with Acorn software	£349.00
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Acorn CD-R Software - call for currently supported drives	£79.99
CD-R blank discs (box of 10)	£19.95

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The NEW Parallel port drive for A3010/A3020/A4000/A5000/RPC/A7000 - comes with printer through port.

Oscar Encore 24 speed CD-ROM drive with Acorn and PC drivers	£169.00

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NEW Indigo 32 Speed IDE internal drives for ***A7000's and Risc PC's*** *(after July '95)*	£94.00
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Special IDE data cable for Indigo drives to RiscPCs with early motherboards, ie BUILT as RiscOS 3.5	£5.00
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Victor quad speed SCSI drives external (limited stock)	£99.00
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HP 6L (mono laser)	£236.00
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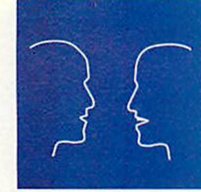


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BBSMouse points the way

Bridging the gap between Web page hypertext and character-based bulletin boards comes *!BBSMouse*, an idea developed by Keith Mckillop to let you control your progress around a bulletin board with the mouse as well as the keyboard. The programmability of Acorn computers once again allows the ingenuity of software writers to flourish.

The *BBSMouse* system uses a server-client relationship that requires software support from both the BBS operator's machine and the BBS user's computer. The user runs the freely downloadable *BBSMouse* server program that sends mouse pointer information from a RISC OS desktop ANSI terminal program such as *Connector* back to the host BBS, and the sysop's system translates the data back into the appropriate screen menu option.



Users click with ARM Pit

When the user clicks the mouse while the pointer is over the terminal window, a simple data packet that describes the pointer position is sent via the modem, just like key presses, to the remote BBS system. The participating sysop will have added code or script to the BBS menus to recognise and decode the mouse data correctly.

Matthew Page's ARM Pit BBS in Peterborough is running the *BBSMouse* system, and control of menu options can be achieved with either mouse clicks or keypresses. Decoding the incoming mouse data is quite a tricky job, as different BBS software packages work in different ways, and no two BBSs are (thank goodness) quite the same.

Matthew's main menus are actually programs called doors, separate from the host *ArmBBS* package, and were adapted for *BBSmouse* quite easily. There's no single *BBSMouse* client software package for a BBS operator to use as yet, so ingenuity and programming ability is the name of the game.

BBSMouse for Arcade BBS running *ARCbbs* seems to be one of the trickier ones, but you can download and try out the *BBSMouse* client on these BBSs: Twisted Spires, 23rd Hour, and ARM Pit BBS, which is on 01733 445800.

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.

YoUR List of sites for ApURL

http://www.abctec.com/
Free Guestbooks, True Type fonts and some free GIF clipart to download

http://www.Duesseldorf.netsurf.de/~fhertel
Frank Hertel's pages; downloads include a front end to Darren Salt's ADFS 1722 Kb floppy formatter

http://www-student.lboro.ac.uk/~phajb/
Andy Boura's Java-Free ARMage software site has downloads, funny songs and his timetable

http://www.come.to/emulate
Dave Sharp's Acorn Emulation Page; including the Message Board for latest news

http://www.argonet.co.uk/users/gmcrow/
Graham Crow's desktop suite site including his demo of *!MenuBar* 2.13

http://www.bolsterstone.demon.co.uk/
Ruth Gunstone, a discerning StrongArm Risc PC user, and her bit o' the Web

http://www.funschool.com
A good range and quality of educational games for Java-enabled browsers

http://www.durus.demon.co.uk/test.html
Dan Everard's browser compatibility page with HTML examples

http://www.arcsite.de/hp/chrismorison/
Chris Morison's Risc *Organiser* site, and a picture of himself

http://www.argonet.co.uk/users/algus/hint1.html
Aidan Gustard's How-to guide for PGPing (Pretty Good Privacy) for RISC OS

http://homepages.enterprise.net/samsmith
Sam Smith's gruntled home pages, with Friends, Cross Country and Acorn links

http://www.angelfire.com/hi/astoneha
Animation downloads by Allan Stoneham and tons of good Acorn links

http://www.stott.demon.co.uk
The Constants and Equations Pages by Jonathan Stott, which started off as a revision aid

http://www.argonet.co.uk/users/bernard.veasey
Bernard Veasey's Shareware software and other Acorn goodies

http://www.ens-lyon.fr/~vlefevre/
Vincent Lefevre's Acorn pages, downloads, Properties of 17 and Yellow Pigs

http://www.majic12.demon.co.uk/acorn/
Wayne Bagguley's Acorn Directory of useful links

Peter's Pangill flies south

Pangill BBS has moved with sysop Peter Gillham down to Didcot in Oxfordshire with a new phone number, new FidoNet address and new features. Primarily an Acorn interest BBS, Pangill also supports files and programs for PCs and compatibles, and specialises in information and files related to the rock band *Queen*. Pangill now offers 24 hour operation, Internet e-mail and access to CD-ROMs, and boasts a full and varied filebase. The new Fido address is 2:252/701.0.

Pangill BBS
01235 812343

Junk mail with !JunkMail

Mike Williams' *!JunkMail* program automates the preparation of complaints about e-mail spam and unsolicited commercial e-mail. It works with most of the popular Acorn e-mail packages including *ANT© Marcel, Pluto, TTFN, Messenger, Voyager, Termite* and *KA9Q*. When you drop a junk e-mail file onto its icon, it cleverly composes an e-mail message reporting the abuse to whichever it considers to be the proper authority, determined from the original message headers. *!JunkMail* contains a database of known and suspected rogue domains, IP addresses and other information on which it bases its activities. Regular updates are advised to keep its resources current.

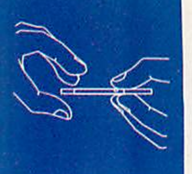
!JunkMail
http://www.econym.demon.co.uk/junkmail/index.htm

Turtles oft found in Wilts

Newly hatched is TURTLESoFT BBS, run by Matt Nicholls from Lea, near Malmesbury in the heart of Wiltshire. TURTLESoFT runs on a 233MHz StrongARMed Risc PC with *ArmBBS* software and a US Robotics Sportster Voice 33k6 modem, using the 5pm-10pm RingBack line-sharing system; wait for two rings, hang up then call back within one minute.

The BBS features a good range of recent Public Domain and freeware, and the message areas offer access to the Acorn Fidonet echoes. Matt plans access from the Internet to showcase his programming and TurtleWeb design partnership with co-sysops Mike Gay and Andy Henner.

TURTLESoFT BBS
01666 822104 RingBack



public domain

Size is everything

Following my comments about *SmallDir* in the January issue, the author has updated it incorporating my suggestion and produced a more powerful version of the program – SmartOpenDir. The excellent result can be found on the Web at http://homepages.tcp.co.uk/~tonyh/ alongside *WinEd*, *Bombz* and *NewsFind*.

Thanks also to Pontus Lurcock (very cool name!) for specially writing a tiny module task that performs the same function. You can contact Pontus for more information about *Minifier* at pontus@arcade.demon.co.uk

RISC OS flowering

Sixteen year old RISC OS coder, Adam Flowerday, recommends a trip to his new Web pages containing an ever expanding set of Acorn links and a growing collection of his desktop utilities and enhancers. For more information surf over to http://www.deathsdoor.com/interpd

Download downtime

Acorn presence on the Web seems to have been gradually changing in organisation over the last few years. In the earlier days of the Internet, large ftp sites were all the craze but in the last few years they seem to have been in decline. HENSA is nowhere near as active as it used to be and except for the odd success story like Arcade, individual's home pages seem to be taking over as the main places to download software from.

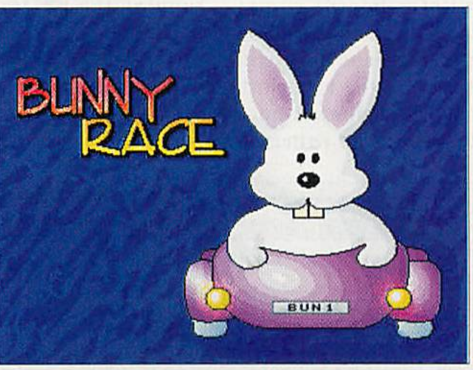
Are we in need of more software archives? Are you trying to set a new one up? Are we better off surfing for individual home pages? Tell me your views and I'll echo them in the column.

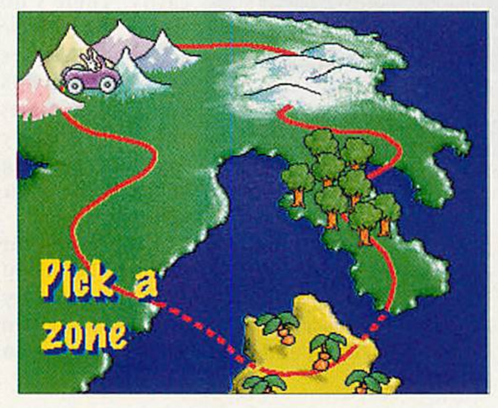
Recommended PD Libraries

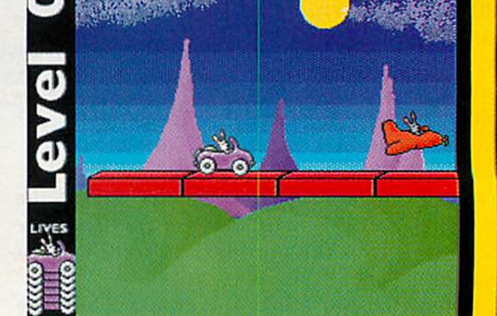
- APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Beebware PD, 83 Forrest Road, Huncote, Leicester LE9 3BH
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ
- The Datafile, PO Box 175, Weston Super Mare, BS24 4PU

Bunny Race

Regular readers will know of my liking for professional presentation and good production values in all software. From my position as PD editor I've tried to encourage a change in attitudes in an area which has somewhat marred a lot of Acorn software. Once in a while however you encounter something so cheesily produced you just have to give in and go with it. *Bunny Race* by Philip Mellor is one such program.







While I'm in the habit of breaking conventions, another thing I don't usually go for is game backgrounds, but the story behind *Bunny Race* is so good I just had to include it here. Take it away Philip...

'Poor old Elvis the bunny really was having a bad hare day. If it wasn't bad enough having some unsavoury character to spray-paint his lovely car in such an unappetising pink colour, they had also stolen all his cabbages! Well, Elvis was not best pleased and set off to find the culprit.

'Following the track of paw prints nearby, he soon reached the burrow of his arch rival, the evil Alfonso! All the evidence was there – the chewed cabbage leaves, the pots of pink paint in the corner... Elvis had caught Alfonso red pawed! However, Alfonso wasn't going to give up that easily! He grabbed the remaining cabbages and jumped into his handily placed get-away plane, and flew away... Elvis knew his mission – to catch up with Alfonso, and rescue the stolen cabbages!'

The game is basically a standard platformer. You must negotiate 20 levels of sliding platforms and obstacles while evil Alfonso tries to stop you. Unfortunately for you, not only is Alfonso's vehicle equipped with the ability to fly, but it's also armed with a deadly stockpile of car-crushing turnips. Fortunately your car is also armed to the teeth with a rapid fire carrot gun with which you can blast Alfonso out of the way.

It is very silly, but to be honest you can't really beat controlling a rabbit called Elvis who's armed with a carrot cannon (please don't quote me on that). You'll either love this game or hate it, but either way it's gotta be tried.

Unlike a lot of recent software, you need nothing more powerful than an A3010 to play this game, which can be downloaded from http://www.geocities.com/SiliconValley/Horizon/8700/

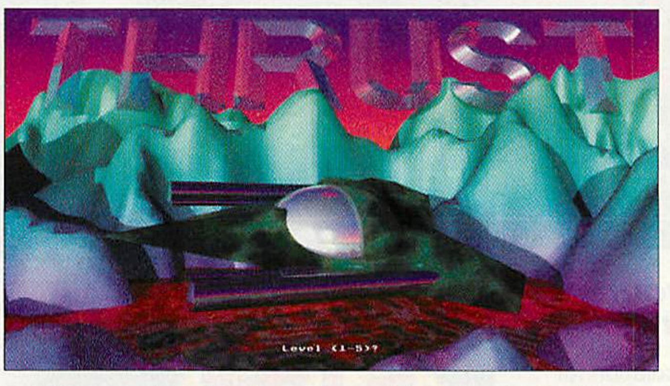
Rez control

Tony Houghton has created another essential utility that makes you wonder how you ever got by without it. Acorn's Display Manager on the Risc PC gives exact control of your screen res' and colour depth, but is a bit of a roundabout selection method for a choice that's usually made between a small number of commonly used modes. *ToggleMode 2* gives you immediate access to four pre-defined modes. All you have to do is run the program and enter the res' and colour depth details of your commonly used modes and *ToggleMode* builds a module into your startup sequence holding these details.

In everyday use you simply click on one of the four quadrants of your Display Manager icon on the icon bar with the Adjust button. This jumps you straight to the pre-defined desktop mode of your choice.

Incredibly simple, easy-to-use and a 20 second job to set up. If, like me, you do a lot of graphics work and find yourself chopping and changing between different screen modes, you'll find *ToggleMode* invaluable. Make the download from http://homepages.tcp.co.uk/~tonyh/

Thrust



Thrust is yet another classic from those fantastic 8-bit days that's found its way back onto our screens courtesy of the public domain. Richard Atterer has recreated *Thrust* for the modern Acorn computer and has managed to update the graphics and controls without destroying the authentic feel of the original. So many modern versions of classic games lack the playability of the first 8-bit code, but Richard's managed to avoid that trap here.

At this point I must sadly make it clear that *Thrust* is an unfinished game. This PD release features only five levels and is hampered by one or two little bugs. The main problem is the lack of level resets and continuity. The game is still very playable but if you lose a life you just have to exit to the game menu and start again. Fortunately this can be done pretty quickly so it's not a problem.

Due to the amount of work involved, Richard has no plans to finish the game but is willing to donate the existing graphics (and some extra levels) to anyone interested in completing it or coding a new version.

I know there are a lot of programmers out there who are held back by the lack of artists to help them out, so here's an opportunity for someone to put together a great game. Get to it, and I'll feature the results on these pages.

The graphics are obviously based on the originals, but they've been enhanced and drawn with skill by Richard. There are also some nice touches in the plotted graphics. Even the line between your ship and the objects you pick up is anti-aliased. The sound is pretty basic and as far as I can tell is almost identical to the original.



What more can I say? If you used to be a *Thrust* fan on the Beeb, you'll be lapping up the nostalgia from this 32-bit version and if you've never heard of the game, you need to check it out now. Just make sure you use a frame limiter on Risc PC machines otherwise it is very hard at a 100Hz frame rate. Like *Bunny Race* however, you can happily play it on an ARM2 machine.

For more information contact Richard at atterer@augsburg.baynet.de

Sound advice

Yet another utility from prolific coder Tony Houghton. As Mr H himself explains 'The purpose of *THSound* is to allow many different samples to be played without having to load each one as a module in its own right (often impractical due to potential name clashes).

'All it does is take a pointer to some data in raw 8-bit VIDC format and use this to make a sound voice. *THSound* is deliberately very basic for flexibility. It is up to your program to manage memory for the sample data, and to attach the voice to channels and play it using the standard Sound SWIs.'

There are so many helpful sound playing, managing and manipulation programs in the PD world that it's really becoming hard to keep track of them. Echoing the 'Download Downtime' comment elsewhere on these pages it would perhaps be an idea to have a Web site devoted to sound utilities.

The site could act as both an archive and a resource providing information to help you find the right tool or utility. If anyone is interested in creating such a site, please get in touch and I'll feature it here in the PD column. Failing that I'm sure I could put together a PD page 'Sound Special' if there's enough demand?

Jack the Lad

Coder Jack Parkinson has been away from the scene for some time, but he's now got his hands on a Risc PC and is coming back with a vengeance, so to speak. His first project is a PD version of *Doom* for Acorn Linux, featuring loads of nifty assembler optimisations. The game is nearly complete, so watch out for further information here within the next few issues.

Processor Abuse

Several people have e-mailed me following my comments about needing a StrongARM to run *Abuse* at a reasonable speed. Apologies to the *Abuse* author as this isn't the case. An ARM600 does the job perfectly well.

BBSs R US

Jon Ripley writes to ask where to get hold of all the programs previously held on the now defunct Digital Databank BBS. Arcade BBS has long been recognised as one of the core Acorn bulletin boards and with its weekend Internet links it's rapidly becoming one of *the* places to visit. But don't forget many of the other popular Acorn BBSs. There are way too many to mention all of them here, but I'd recommend you start with Arctic on 0589 136474 and Northern ARM on 01274 530841.

More Revelations

As promised last year, the excellent Revelation demo competition is set to be repeated again, this year at a new venue – Acorn World '98.

Organiser John Stonier (former sysop of Digibank and organiser of the Acorn SouthEast and SouthWest shows) is currently in negotiations for what looks set to be a rather impressive competition line up.

The top prize is a Risc PC2 system kindly donated by Acorn along with other prizes for runners-up.

Full information on the competition and the venue details in next month's issue. In the meantime, check out the competition website at http://www.argonet.co.uk/acornshow/rev/

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to aupdpage@idg.co.uk

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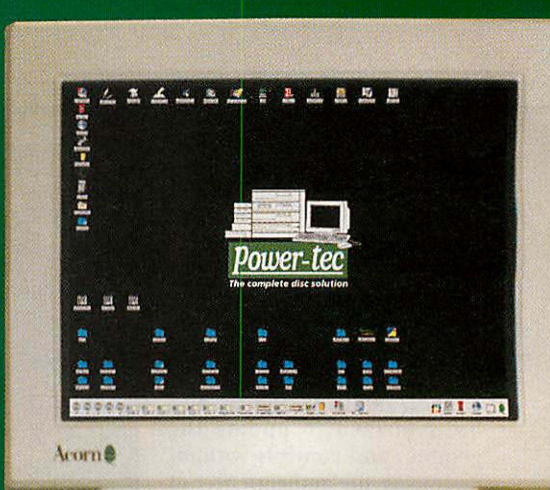
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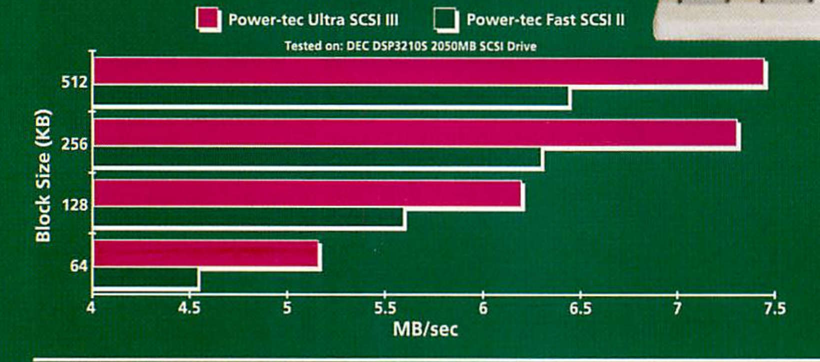
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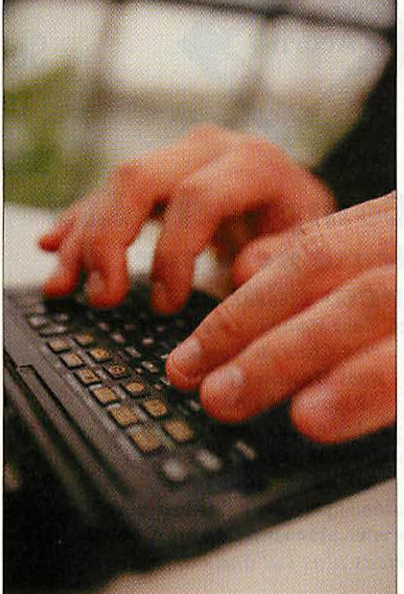
E&OE



E-mail and the Internet

No you're not reading the Comms Page but the Business Page. I have used e-mail and the Internet, or more specifically the World Wide Web, for a number of years now. I have to confess that this has been exclusively on a PC-based system. There was no conscious decision to avoid any particular Acorn-based Internet solution – it just happened. In general terms I was quite pleased with both the Internet provider and the service, although it was far from perfect and could be exasperating to say the least at times.

The advent of fast modems and the relative ease with which they could be set up and used was certainly a factor in persuading me that communication via a computer was worth persevering with – even on a PC. Early (circa 1985) modems and comms software elevated the whole subject to that of a 'Black Art'. That is, few found it easy, novices were put off and only real experts or the very dedicated could benefit from the experience. This was probably the main reason for the popularity of the fax machine. Anyone who could use a telephone could send a fax.



Even this was not foolproof – a colleague of mine who used the fax quite regularly noticed that his messages seemed to suddenly be taking an age to transmit. Much scratching of heads and investigation eventually led to the discovery that instead of using ordinary plain scrap paper to compose his hand written faxes he had started to use some millimetre graph paper he had found lying around. Sure enough the fax was scanning and transmitting every line and taking a long time about it.

The communication software improved but that went alongside the development of graphical user interfaces and WIMP operating systems. Certainly its use in business was not something you would bank on. It was slow, unreliable and of very limited use. To set things in context however, the use of computer systems in business was not as sophisticated and mature as today. This was the era of Data Processing when computers were little more than number crunchers.

Today e-mail is rapidly replacing snail mail and the fax machine as the primary form of written communication. As the advert says, *the future of business is on the Internet* – although this is still over-hyped and no one can predict the future development of either business or the Internet with any certainty. Anyone who says that they can is either very brave or a charlatan.

Personally I have found e-mail to be of more use than any other aspect of Information Communications Technology (ICT). For any business – and that is probably most that rely on communication – e-mail is *the* medium to use. It has many advantages and almost no disadvantages. While not quite instant it certainly beats most alternatives and I include both internal and external e-mail systems in this conclusion. I know it is open to abuse and the tale of an office worker e-mailing someone in the same office to ask them to open a window is probably an urban myth.

E-mail is as prone to disaster as any other method of communication. A small software house recently e-mailed me details of their latest offers which was forwarded automatically from the *Acorn User* mail server, unfortunately it kept repeating and repeating and when I last looked it was still there repeating away.

Where is all this leading? Well, a change in personal circumstances has meant that I am currently PC-less and unable to communicate electronically via e-mail. You do not miss it until it is no longer there. I am, however, taking the opportunity to switch from a PC based e-mail/Internet system to one based on my A7000.

The next Business Page (in June – if all goes according to plan) should give me the opportunity to recount my experience of what the Acorn market has to offer and how it compares to my PC exposure.

In the meantime, if any of you have experiences that you feel deserve a wider audience then please e-mail me at the address at the bottom of the page. This will be dutifully printed out, popped in an envelope and posted on to me. Not the fastest system, but reasonably reliable.

Ancestry anguish

The recent Business Page survey of good packages badly supported attracted yet another letter from a reader bemoaning the lack of support/development for *Ancestry* from Minerva. While not strictly a business application (unless your business is genealogy), the fact that the reader feels there is a ready market for this type of application is worthy of support.

As he says "That there is a worthwhile market is shown by the fact that a current list of genealogical software lists 37 such programs for the PC and six for the Apple Mac (sic). It is both sad and infuriating that there is no decent up-to-date program for the Acorn market." I quite agree Mr Wotton.

HardCash update

RaspSoft Business Software have consolidated their *HardCash* payroll system into three versions. *HardCash Junior* is, as its name implies, a basic payroll package for up to 50 employees. The Advanced version is the same a Junior plus automatic calculation of SSP and SMP, company pensions, full vehicle tax and fuel calculations, time card calculations and user defined payslips. The new Professional version has, in addition, unlimited employees, unlimited user defined companies and other more advanced feature. The prices inclusive are £49, £99 and £149 respectively.

A demo of the Advanced version is available on the RaspSoft website at http://www.argonet.co.uk/business/s.dine

RaspSoft Business Software
Tel: 01274-671922
E-mail: raspsoft@argonet.co.uk

EasiWriter easier

The new professional version 4 of *EasiWriter* is now available. The major improvements include the ability to read and write Microsoft *Word* 6/7 documents and read and write HTML.

As someone who has just spent a lot of wasted time converting *Word* documents into *Impression* via *Edit* and various other means and then reformatting and removing various odd characters I have to say this ability is just a little too late. But next time I know where to go.

Other enhancements include improved tables, automatic numbering, save as *!Draw*, bookmarks save as PostScript, improved colour handling, smart quotes and index and table generation.

The upgrade costs £30 plus £3 p&p plus VAT for a single user.

Icon Technology Ltd
Tel/Fax: 01778-590563
E-mail: mike@iconsupport.demon.co.uk

Contacting me

You can contact me, Mike Tomkinson, by post at the usual *Acorn User* address or by dropping me an e-mail at: *aubizniz@idg.co.uk*

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A4000	£200
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A3010	£ 150
A3000	£ 100

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Monopolise your S5



Decisions, decisions...

The classic board game, Monopoly, was an instant hit when Psion released it for the PBII/3a. Now Psion have updated the game for the Series 5 and obviously I felt it my duty to grab the iron and try it out!

The program is supplied on a floppy disc which has an automatic installation package for PCs but if you have a Mac or very soon an Acorn you can install it manually using the relevant link software. Installation is relatively quick and the application occupies about 700K of disc space. Once installed the program appears on the extras bar and is loaded in the normal manner.

When loaded it becomes obvious that, at heart, this is just an updated version of the S3 version designed to take advantage of the new features of the S5 including the larger screen and faster processor. For some programs this would have proved to be a mistake, but in this case it is an good idea as the S3 version was an excellent conversion of the board game.

Some of the new features in this version include a bigger board overview, more sound-effects, animated dice and five different versions of the board including the American, French and German variants.

The program retains all the features of the original, including the ability to configure the rules to suit your style of play, have timed games and play against up to five friends/computer players.

Taking advantage of the touch-screen the trading section of the game has been redesigned and trading is now done via a drag and drop system which is much easier than on the S3. Also, thanks to the new screen, taking Chance and Community Chest cards is now much easier as you simply click on them.

All the traditional Monopoly pieces are included as well as a number of computer players which all have different artificial intelligence.

Overall this is a superb implementation of a great board game and will keep fans entertained for hours. The game costs £30 and is available from all Psion retailers. Now all I need is a conversion of Cluedo and then I can play both my favourite board games on the move. Any takers?

Psion -> Acorn Links

As I mentioned in my AW97 report, several Acorn companies are developing link software for the S5. The first two products should be available by the time you read this

PsiRisc is IMS's effort and will cost £69.99 without a link cable but if one is needed cables are available at an extra cost. The software will allow the Acorn to link to the entire Psion range including the 3c and S5. It will support file conversion for *Word*, *Sheet* and *Data*, long file names and full backup facilities. The 3c version was due to be available early February with the S5 one following shortly afterwards. For more details check out the IMS website at http://www.ims-cdc.demon.co.uk/

Paul Vigay has also announced more details of his Psion 5 link software – *ArcLink5*. The software has been available in beta test form from his website since early January and several updates have already appeared. The software currently does not support file conversion but this is planned and rather then cater for long file names directly, the program is designed to work with X-files.

This is a PD application which allows RISC OS users to have long filenames and more than 77 files per directory. *ArcLink5* does however support drag and drop file transfers which is a vast improvement on the current situation. The program is shareware and is available direct from the author at a cost of £29.95. More details are available from his website at: http://www.interalpha.net/customer/pvigay/Psion/index.html

Price reductions

Owning a Psion became much cheaper just before Christmas when the 3c was reduced to £269. This machine has 2Mb of RAM, a backlit screen and makes an ideal palmtop if you don't need the added feature of the S5. The old non-backlit version can be picked up for as little as £200 from some retailers.

Also reduced in price were the Compact Flash memory upgrades for the S5. These now start at £39 for the 2Mb, £69 for the 4Mb and £169 for the 10Mb upgrade. The new prices represent savings of up to £50 compared to the original prices, and if you find yourself running short of memory there has never been a better time to treat yourself.

Psion plc
Tel: 0990 134224

PsiZip

Since Psion released their messaging suite, users have been able to download zip files to their Psion and then hit the proverbial brick wall as there was no way of uncompressing it. This has now changed with the release of *PsiZip*.

The program is shareware, costs £15 and allows files to be unzipped on the S5. The program isn't a true filing system so files have to be expanded out of the archive before you can do anything with them. The program is easy to use and works really well and if you use your Psion for Internet surfing should be considered an essential purchase.

PsiZIP in action

Next month

In next month's *Acorn User* there will be a special two page round-up of some of the latest software available for the S5 including *En Route, Soundmaster, Presentation Maker* and more.

I appreciate that the coverage in this column has shifted in recent times, towards the S5. This is not deliberate, but reflects the current state of the palmtop market and as Acorn links are soon to be available for the S5 this machine is becoming ever more popular with Acorn users.

Psion shut out laptop

Sheffield Steelers are one of Britain's top ice-hockey clubs and offer supporters an excellent period by period update service on their website. Recently this service suffered a bit of a setback as the laptop usually used to write the report ran out of batteries. However all was not lost. Although there was no period by period update, the Webmaster used his Psion 5 to write the match report and then uploaded it onto the site as soon as he returned from the match. A classic tale of, why, although laptops do have their uses, for many purposes, the palmtop rules on high.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to auport@idg.co.uk

cover disc

raFS

Richard Atterer

raFS is a filing system which allows for files with long filenames and for any number of objects in directories. It stores the files you save to it on a host filing system, for example ADFS, as individual files.

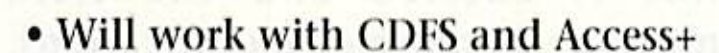
The limits imposed by the standard Acorn filing systems (all those that use FileCore), which prohibit filenames longer than 10 characters and more than 77 objects in a directory have always annoyed people. Because of this, there have been several products which attempt to bypass FileCore either as an image filing system (like *ArcFS*) or as a "hack" like *LongFiles*.

raFS has been written as a normal filing system. The files that you save to *raFS* aren't stored in one large file, but as individual files in a directory structure that the program sets up on another filing system. This means that you can take full advantage of the host filing system's abilities to manage files, which is much more effective. Additionally, there are much better chances of retrieving your data if something goes wrong.

raFS Choices		
Storage dirs mounted on startup		
Commands for clicks on icon bar		
Select	Filer_OpenDir raFS::<raFS$Disc>.$	
Adjust	Desktop_raFSFiler -choices	
Directory cache		
Cache size	30	kBytes
Save dirs after	500	centiseconds
or after	10	modifications
Default	Save	Cancel / Set

raFS has the following features:

- 100 per cent written in assembler
- Because it is not an image filing system, there are no problems when used together with InfoZip, sFTP and other programs and the size is not limited to 4Gb – or even 2Gb if on a FileCore-based filing system
- Buffers directory data so that accesses are very fast
- Supports multiple "discs" (up to 50)
- Easy creation and mounting of discs with the desktop part (*raFSFiler*)
- Will either use the sprite area (RISC OS before 3.50) or a dynamic area (RISC OS 3.5 and above) for its buffering. If the sprite area is used, this is done in a way that is compatible with other programs
- Will work with CDFS and Access+
- There is also a German version



Usage

raFS is loaded into memory by double-clicking on *!raFS* or on a disc application directory (like the example *!raFSDisc*) in a directory viewer. It will install an icon on the iconbar. You may want to copy the *!raFS* application into your !Boot.Choices.Boot.PreDesk directory to have it loaded every time the computer is switched on.

Before you start, the way *raFS* manages its discs should be clear to you. Actually, the word "disc" may be misleading – *raFS* does not introduce a new disc format of its own. I will talk of "discs" nevertheless because they are handled in the same way: They can be created, renamed, mounted and dismounted, and their name will appear in directory displays in the form "raFS::DiscName.$. ..." Unlike with image filing systems, *raFS'* discs are not stored in one large file, but as single files inside a directory.

raFS can store the data saved to discs in two types of directory: One is an application directory whose name begins with "!" and which is displayed with a special icon. The second is a normal directory, which cannot be distinguished from other directories until you double-click on it. If you do this and *raFS* is loaded, *raFS* mounts (makes known to the system) the disc contained within that directory and opens the root directory of the *raFS* disc instead of the directory you clicked on.

Create new disc
App: !StoreDir
Name: DiscName
Cancel | Create

Working with discs

The iconbar menu offers many commonly needed operations on mounted discs. If no discs are mounted at all, the entries below the dotted line are greyed out. Most of the options are obvious and work as expected but two that might need further explanation are:

- Read-only – lets you write-protect discs so that any subsequent attempts to alter the data on them will be faulted. If a disc is write-protected, its name is ticked in the sub-menu. This option does not work for discs stored on DOSFS due to incorrect behaviour of that filing system.
- Open parent and Open root – opens the respective directory for the selected disc, or for all mounted discs if the entry in the main iconbar menu is selected.

raFS
Info ▸
Flush
Choices...
New disc ▸
Read-only ▸
Name disc ▸
Open parent ▸
Open root ▸
Dismount ▸
Quit

Important: Should you ever want to move a storage directory or rename the disc it resides on, you must dismount the *raFS* disc first.

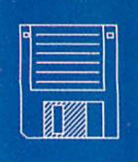
raFS has the useful ability to let you use a whole hard or floppy disc for one of its own discs.

When you click e. g. on the floppy drive icon to display the root directory, the program looks for the *!Mount* file just like it does for double-clicks on directory symbols. To create a disc like this, enter the name of the hard or floppy disc's root directory (e. g. ADFS::HD.$) in the first writable, choose a name for the new disc and click on Create.

The Choices window

Clicking with Adjust on the iconbar icon or selecting Choices... opens a window with various settings that influence the program's behaviour. You can also save your preferences from here.

- Storage dirs mounted on startup: In the ➤



➤ writable fields of this section you can enter the names of up to two discs by dragging the storage directories to the fields. *raFS* will then mount these discs automatically every time it is run.

• Commands for clicks on iconbar: The commands executed when the iconbar icon is clicked on can be changed here. By default, the commands display the root directory of the disc mounted last (Select) and open the Choices window (Adjust).

• Directory cache: This part of the window controls *raFS'* directory cache, which is used by the filing system to speed up accesses to its discs. When you make changes to a directory, for example by deleting a file, the changed directory information is not saved to the host filing system immediately, but only after a certain delay or after a given number of modifications, whichever of the two happens first.

For both the field where the delay in centiseconds is entered and the field containing the number of modifications, the values 0 and 1 have a special meaning: 0 tells *raFS* to completely disable saving of directories automatically after a delay or after any number of modifications, respectively. If both values are 0, changed directories are only saved to make room if the maximum directory cache size has been reached, and when discs are dismounted.

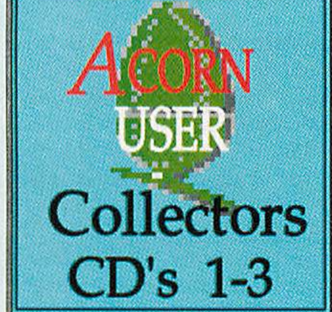
A value of 1 in either of the two fields forces immediate write-through of any changes to the host filing system. If you know a little about *commands, you can deal more elegantly with frequently crashing applications by adding raFS_Unsafe and raFS_Safe commands to their !Run files.

Full instructions are contained in *raFS'* help file which is an HTML file and will require a Web browser to view correctly. Otherwise load the file into a text editor.

Public domain

TaskUsage	How much processor time are your desktop programs using?
Lister	Simply lists files
Multishow	Displays sprite, draw and JPEG files at timed intervals
ReadMe1st	Can be used to display a ReadMe file
Config	A StrongHelp file with information about machine configuration
DisSquare	Divides up a square with squares
FlexiPlan	Creates drawfile wall planners
Automine	From the game of a similar name
Huffman	Compress and decompress
AcornUser	An index of the programs on the AU CDs





Task Processor Usage

Total Processor Usage	16 %	
All Application Tasks	10 %	
InetSuite	0 %	
MenuBar	1 %	
Alarm	6 %	
Pinboard	0 %	
OmniClient	0 %	
Zap	0 %	
POP	0 %	
NewsHound	0 %	
Newsbase	1 %	
Messenger	0 %	
Publisher Plus	1 %	
Paint	1 %	
All Module Tasks	4 %	
Task Manager	0 %	
Filer	0 %	
Resource Filer	0 %	
Free	0 %	
Display Manager	0 %	
VProtect	0 %	
IPH	0 %	
SaveDesk	0 %	
Free Memory Display	0 %	
Out to Lunch	0 %	
ADFS Filer	0 %	
SysLog	0 %	
ArcFS Filer	0 %	
RAMFS Filer	0 %	
Task Usage	4 %	

WimpBasic

Some of the public domain programs on this month's discs require the *WimpBasic* module from Clares. This is available on the Web (URL given when you attempt to run one of the programs) and will be supplied on next month's discs.

Regular items

- Mike Cook's temperature gauge software
- All the *INFO programs
- The demonstration 3D programs

Disc information

The software on these discs has been compressed using *ArcFS 2* from VTi, and are opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH*. If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover discs have been checked for viruses using *Killer* version 2.800 from Pineapple Software.

Jack Kreindler discovers the difference that *DrawWorks Designer* can make to *Draw*

Drawing *solutions*

DrawWorks Designer (*DWD*) from iSV Products, despite the impression given by its name, is not a standalone graphics package. It is effectively a 'plug-in' for *Draw* that enhances the interface and in many areas adds to the functionality of the standard RISC OS drawing program.

Facing the problem

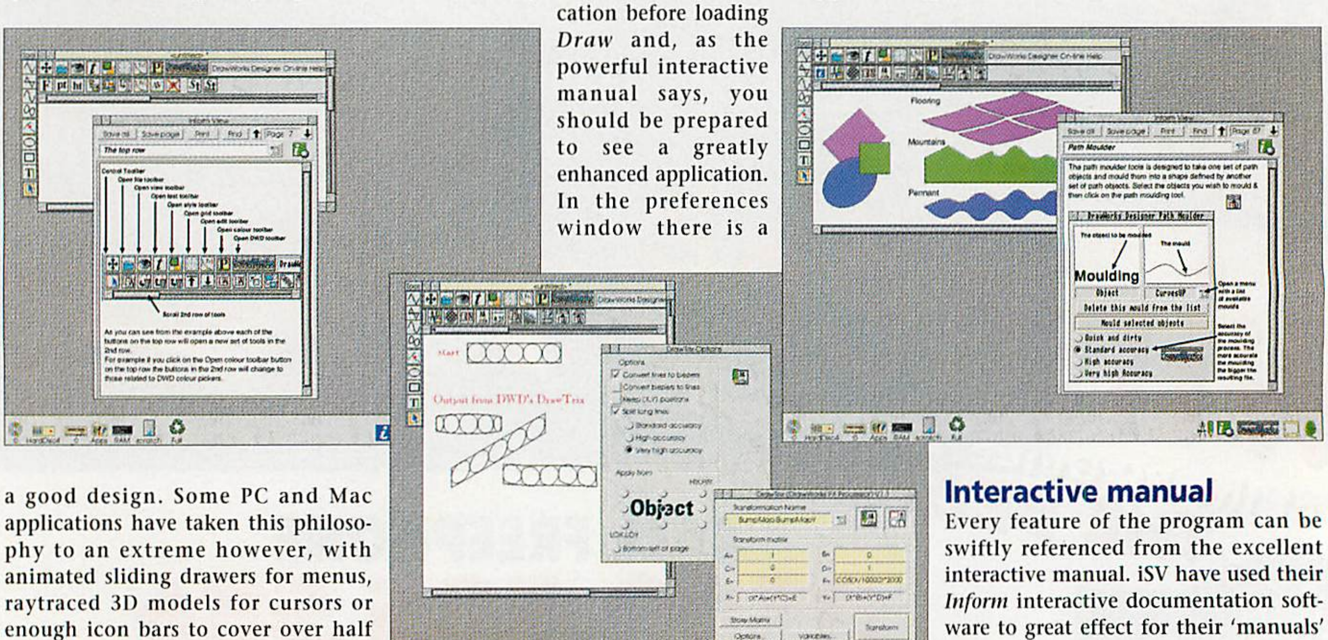
The interface has never been a strong point in *Draw*. Indeed there are few RISC OS graphics applications with a brilliant interface, which is a shame as the ease and speed of use can be greatly improved with a good design. Some PC and Mac applications have taken this philosophy to an extreme however, with animated sliding drawers for menus, raytraced 3D models for cursors or enough icon bars to cover over half the screen area. The *DWD* interface for *Draw* makes use of attractive and relevant icons without cluttering the screen. The majority of the icons execute functions which normally require tedious menu navigation to find.

This has been one of the greatest let downs of *Draw* which is potentially a very useful basic vector graphics program. Other icons are for new features which *Draw* does not support; these are discussed later.

Greatly enhanced

The whole package installs into a 1Mb directory on the hard disc. Load the application before loading *Draw* and, as the powerful interactive manual says, you should be prepared to see a greatly enhanced application. In the preferences window there is a nice option for automatic loading of *Draw* on starting *DWD*. Once *Draw* is up and running two new bars appear, one which is purely an aesthetically improved *Draw* toolbar and the other, two rows high, sits in the top part of the main work area.

The top row is basically a mode selector for the function buttons in the bottom row, but the former also includes a dialogue box for interactive help text on all the *DWD* functions. *DWD* is also fully supportive of Acorn's interactive help system and the much loved *BubbleHelp* application.



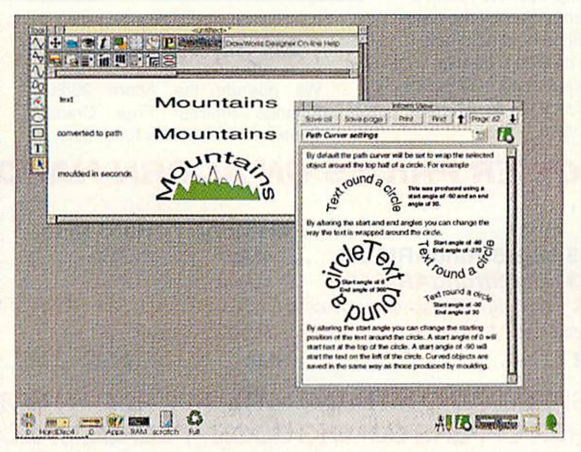
Interactive manual

Every feature of the program can be swiftly referenced from the excellent interactive manual. iSV have used their *Inform* interactive documentation software to great effect for their 'manuals' for previous products and the one for *DWD* is no exception. This particular

Inform document acts not just as a manual but also as a tutorial and I imagine that anyone who has not used a vector graphics package before would greatly benefit from the easy to understand and nicely designed software manual. Although it is 64 pages long, each page is small and makes its point quickly; another ingredient for a good manual.

Following the manual through, it becomes clear that *DWD* makes the same difference to *Draw* as Cosworth made to the Escort. It turns *Draw* into a powerful tool and though the graphics engine is unchanged, vector graphics creation is faster purely because of the interface.

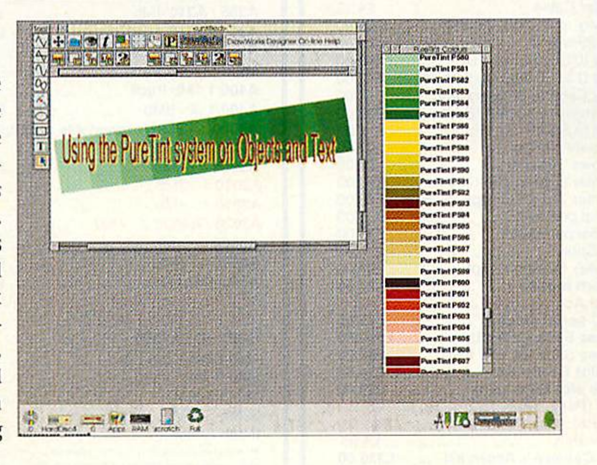
It is also clear that this program, in conjunction with the interactive manual will be very useful to schools and those on limited budgets where *ArtWorks* or *Vector* is either unsuitable or too expensive. Indeed the package actually teaches you about *Draw* and drawing in general. Importantly, it also allows the user to explore every aspect of *Draw*'s strengths and makes many of the less intuitive functions easy.



Ability levels

Augmenting its ability to teach the user, the preferences box allows you to select one of three user ability levels that the program will start up in. Basically, the Student gets fewer buttons than the Standard user, and only the Designer user receives the full compliment.

But just using *Draw* to create regular *Draw* files is not the sole intention of *DWD*. There is one special mode selected by clicking the large *DrawWorks Designer* icon on the top bar. This 'special tools' section is highlighted by useful Info and Preferences windows, DrawTrix – which acts more like a separate package which imports, processes and exports selected objects back into *Draw*, Path Moulding and Path Curving tools, a precision object transformation editor, and an interesting step and repeat tool, something that made *Vector* invaluable in the past.



Special tools

Overall the special tools section is one of the main areas where functionality and not just interface has been enhanced. Each of the tools acts like a small program in itself taking the selected object and running it through processes which are separate from *Draw* before placing them back in scene.

Creatively the most important of these tools are the deformation or moulding processors which can produce a wide variety of effects. Paths can be chosen from the many provided or custom designed and saved into the application.

DrawTrix uses matrix transformations, not simple paths, to generate its effects. For the non-mathematically minded the maths may be too complex to fully grasp but there are so many pre-defined 'tricks' among which you are bound to find an interesting effect and just playing around with the values soon leads to basic feel of the processor and an understanding of how to produce effects specific to your needs.

Other areas of note regarding new functionality are the bitmap exportation and colouring systems. Especially useful for producing website graphics and antialiasing vector files, *DWD* allows you to export files or selections as 256 colour Sprites, JPEGS and GIFs.

I found that background colours for the GIF files for websites were not accurate but the antialiasing is a valuable feature. So too is the colour picking system called PureTint with hundreds of predefined tints to choose from and the ability to select and save from a named colour list. *DWD* also allows selective colouring of text, object or background, irrespective of any mixture of types selected.



Conclusion

If you are considering upgrading from *Draw*, then *DWD* is a well-priced and powerful application. The familiarity factor will be important for some as will be the excellent manual/tutorial. It turns *Draw* into a good challenger for the likes of *Vector* although it does not compete with *ArtWorks* for more artistic graphics origination.

But graphic artists are clearly not the users *DWD* is aimed at. Yet, as a user of *ArtWorks* for six years and with the luxury of having all the vector programs and utilities I require for artwork, I am happy that *DWD* is now a part of my Boot sequence and look forward to using *Draw* for vector editing when in the past I did my best to avoid it. AU

Product details

Product:	DrawWorks Designer
Price:	Single user – £31.50 Site licence – £61.50 Prices inc UK p&p
Company:	iSV Products
Address:	86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel:	01344 455769
E-mail:	atimbrell@aol.com
WWW:	http://members.aol.com/isvproduct/ Early versions can be upgraded to v1.13 by downloading from website



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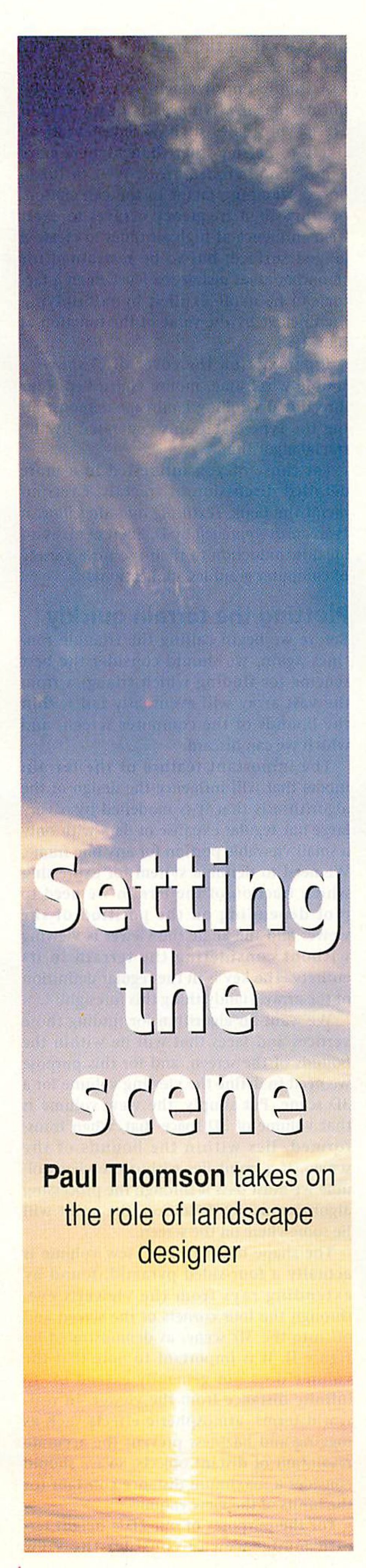
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Landscapes are a common feature of computer games. They give an interesting backdrop to the action or form part of the actual game play, as in the original Archimedes hit game *Zarch*. Carefully designed landscapes can enhance the playability of a game providing the nasties with features to spring attacks from and the player with somewhere to take refuge.

This article details some of the popular techniques used by current computer games to plot semi-realistic landscapes for use in our slowly developing game engine, from developing methods for generating an interesting landscape to plotting it quickly on the screen with realistic shading and sky.



Setting the scene

Paul Thomson takes on the role of landscape designer

Generating the landscape

Before we start thinking about how to plot the various hills and valleys of the terrain map, we need to develop a few ideas regarding the representation and generation of the map.

Firstly, it will only be possible to represent a finite, indeed quite small, area of terrain due to the limitations of memory available to us. We will be defining the landscape in terms of the altitude or height of various sections of it above the 'sea-level' of the model, so the representation of the structure will be in terms of an array of height values for specific coordinates on the map, along with various other properties such as surface colour, texture, and normal direction.

There are essentially two schemes for defining the arrangement of point samples from the real to the digital map:

1. A two dimensional array with element [x,z] containing the altitude of the terrain at grid reference (X,Z). We refer to grid coordinates as X and Z as the terrain is considered as extending to the left and right and in and out of the monitor, the usual directions for X and Z components respectively. The Y coordinate is the height value of the terrain at that point. Notice that the array will contain a regular set of samples, each separated by identical distances.
2. A set of sparse sample points ((X1,Z1), ..., (Xn, Yn)) defining the important features of the terrain in some irregular fashion. Each set of points will contain additional information specifying the height and surface properties of the terrain at the specified location.

Both schemes have their respective advantages and disadvantages. The first offers immediate access to the values within a known range, but may contain a lot of redundant data in non-varying parts of the terrain. The second allows the terrain to be defined with arbitrary accuracy only in those areas that require it, letting large flat areas of the terrain be defined with the minimum of data – the sample rate can be increased in detailed parts of the terrain. The drawback to the second scheme lies in the intrinsic complexity of accessing the data required; there is no easy way to pick out the set of values in a certain area as we must search the sample set to find the relevant data.

Unfortunately, due to the complexity of the routines involved and the limited space available to describe them, we must make do with the first scheme described. As the article progresses it should become clear where the implementation of the two types will differ, and the difficulties of adapting the second to our uses.

See – no CAD program used

To design our landscape model we could fire up *TopModel* (or whatever CAD program you happen to find handy) and set about drawing an exciting landscape full of exciting mountains and perilous chasms. Fine. Unfortunately this doesn't really fit the ethos of this DIY game programming series, and besides that, it would be quite boring drawing lots of hills using our regular grid structure. We can, with a bit of help from those maths books again, define our terrain mathematically and express the whole lot as a function, saving on both creation time and storage space in one go.

The sort of maths required to model interesting terrain is based on the mathematics of fractals, specifically, fractal based noise. Put simply, fractals are geometric objects that demonstrate repetition at varying scales. A typical example is the ubiquitous Oak tree. If one considers a branch of the tree separately, the geometry is very similar to that of the overall tree. Looking closer, each smaller branch from the first also shares this geometry, right down to tiny twigs. This repetition of geometry is one of the fundamental aspects of fractals.

The motivation for applying fractals to the generation of realistic terrains can be viewed in a similar respect to the Oak tree example. Consider a mountain range. From a distance its shape is constructed from several quite smooth curves. Looking closer each valley is also built from a number of smaller curves, each of which could be considered a scaled down set of mountains in their own right. This repetition continues right down to the microscopic mountains present on each rock of each hill side. Fractal modelling should therefore be capable of producing natural terrain models.

To understand how we replicate the properties of fractals using a computer we must define a few terms:

- **The basis function:** This is the underlying geometry that will be replicated at varying scales. For our terrain model such a geometry will be a series of random lumps, referred to as a noise function.
- **Frequency of the fractal:** This specifies the frequency of the lumps in the basis function.
- **Octaves:** Defines the number of times we scale down the basis function and add it back in. The higher the number, the finer the detail will be, at the expense of calculation speed.
- **Lacunarity (gap):** The ratio between repetition frequencies in the fractal; the ➤

amount by which the basis function is scaled between successive octaves.

• **Fractal increment:** A measure of the fractals roughness. A value of 0 generates a fairly smooth fractal, 1 gives an almost totally random result.

This particular type of fractal is referred to as 'fractional Brownian motion' or fBm, and the algorithm to evaluate it at a given point is:

```
fractal( point ) =
  value=0
  frequency=1
  for octave = 0 to octaves
    value+=basis(point)*exponent_array[octave]
    point*=lacunarity
  next
  = value
```

Where the variable point is a multi-dimension vector (usually 2D) and 'exponent_array' is defined by:

```
frequency=1
 for octave = 0 to octaves
   exponent_array[octave]=frequency^fractal_increment
 next
```

The basis function used, as mentioned earlier, is a noise function. A simple noise

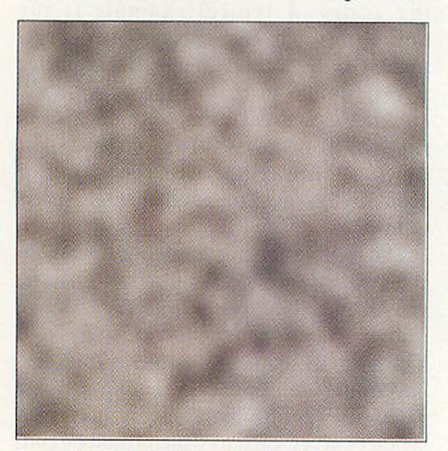


Figure I: Noise function used as fractal basis

function that is quick to evaluate can be made by generating and smoothing a large 2D table of random numbers. Figure I shows such a table. As the components of the variable 'point' in the fractal function are likely to be real values rather than integers, we need to be able to evaluate the noise function at fractional coordinates, which can be achieved by interpolating the neighbouring values. The quality of the resulting fractal depends heavily on the accuracy of the basis function, so cubic interpolation is a more suitable method than simple linear interpolation.

To generate our fractal terrain we could simply evaluate the fractal function for each coordinate of the terrain array, storing the result in the height field. A simple modification to the fractal function can lead to even more convincing terrains. Natural landscapes are formed by more subtle processes than the fractal function presented here.

A simple improvement is suggested by noting that low-lying parts of the terrain are, by processes such as sedimentation, likely to be smoother than higher, more exposed and eroded areas. We can introduce a damping factor to the calculation, to allow high frequency octaves to exert their influence at high altitudes to create a jagged surface, but to be restrained for smoother areas nearer sea level. Such a factor can be made explicit by multiplying each octave by the value of the function at that step.

Program 1(on the cover disc) shows a simple wireframe, mouse controlled, four directional scrolling landscape demonstrating the type of terrains generated by the fractal algorithm.

For those of you interested in a more detailed discussion of fractals, I recommend the book *Texturing and Modelling, a Procedural Approach* by D. Ebert et al, as an ideal introduction to their use for a variety of computer graphics applications.

Plotting the terrain quickly

Before we begin calling the triangle routines again, we should consider the best scheme for finding which triangles from the vast array will eventually fall within the bounds of the computer screen, and which we can discard.

The important feature of the terrain model that will influence the design of the algorithm is that it is modelled by a very large but regular expanse of data with only a small viewable portion for any one frame. We need to define a system for expressing which fraction of the terrain we need to plot depending on the position of the viewer and the angle the viewer is viewing without considering the terrain in its entirety. The key is in the regular definition of the array. Handy thing this foresight.

We want an algorithm for finding those vertices and faces that will lie within the bounds of the screen, and for this purpose we need to define the viewing volume for a 3D scene. Put simply, the view volume is that volume of 3D space that, when transformed, lies within the bounds of the screen. If a point lies within the view volume we must pass it through the processing algorithm as, by definition, the result will lie somewhere on the screen.

The shape taken by the view volume is actually a four-sided pyramid, found by extending rays from the viewer's eye, through the four corners of the screen and off into the 3D scene, as demonstrated by Figure II. It is important to note that the volume does not generally extend off to infinite distance from the viewer. In real-world terms, atmospheric effects such as fogging and haziness prevent the accurate resolution of distant objects, so we should consider a maximum distance constant for the limits of the view volume.

For the purposes of our 2D + height terrain model we can consider the view

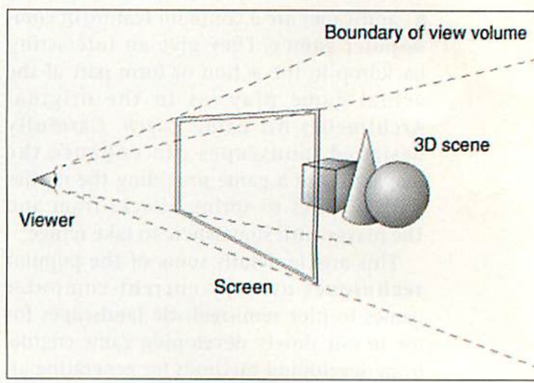


Figure II: The viewing volume

volume from directly above, turning the pyramidal volume into a triangular area. Since we know only to consider those points that are contained in this view area, and that our vertices form a regular grid array, we can simply 'scan convert' the view triangle over the grid of values, and in a similar way to plotting the pixels, the routine can pull values from the height array to pass through the plotting

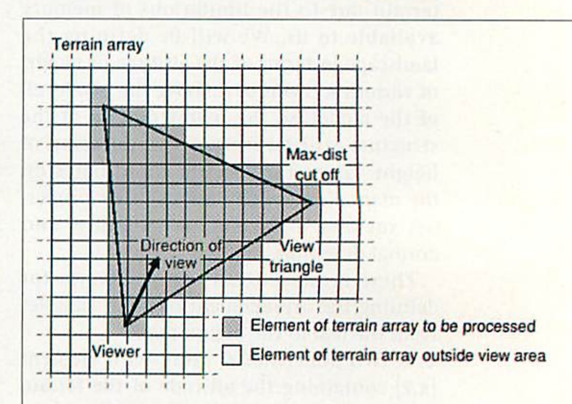


Figure III: What you can see

mechanism. Figure III shows the overlayed triangle concept, and gives an idea of the 'scan conversion' necessary for the process.

Simple maths lets us find the coordinates of the view triangle with respect to the viewer location, direction and the terrain grid:

```
                              x                              y
Pixel_x = perspective * -          Pixel_y = perspective * -
                              z                              z
```

*** The '-' are divide bars ***

Considering the right hand edge of the screen which, when measured from the middle of the screen, is at:

```
          width                x           width       x
Pixel_x = —-- = perspective * -   =>  ———————-  =  -
            2                  z      2*perspective   z
```

where 'width' is the horizontal resolution of the screen in pixels.

Therefore 3D coordinates holding the above relation are mapped to pixels on the extreme right edge of the view area, and by

simple trigonometry this line of pixels is at the angle:

$$\frac{x}{z} = \frac{width}{2*perspective} = tan(angle) \Rightarrow angle = atn \frac{width}{2*perspective}$$

We now know the angle between the direction vector, as shown in Figure II, and the left and right edges of the view triangle, and by specifying the maximum distance to consider by the constant 'max-dist', the coordinates of the view triangle can be calculated by:

```
left_x = view_x + max_dist * sin (view_angle - angle)
left_z = view_z + max_dist * cos (view_angle - angle)
```

and

```
right_x = view_x + max_dist * sin (view_angle + angle)
right_z = view_z + max_dist * cos (view_angle + angle)
```

The third coordinate is at (view_x, view_z).

Using these 'coordinates' on the terrain map, we can 'plot' the triangle using the same techniques as for our original triangle renders, that is by calculating the gradients of the edges and stepping from one row to the next filling from the left edge to the right. The notion of plotting a pixel is now changed to a call to include the particular terrain element in the transformation process. When all the terrain array squares contained in the view triangle have been processed, we can merge the resulting triangle references with those from the 3D game objects and sort the buffer as one uniform structure to let the objects interact with the terrain, obscuring some parts of the terrain, but being hidden by others.

As mentioned in a previous article, we need not recompute the shading data for the terrain each time we plot it, as we can assume the light sources and the terrain mesh are static throughout the game play, and no changes in the lighting interaction will take place. We can therefore preprocess the terrain data at our leisure applying whatever lighting functions we wish.

We are now ready to plot the landscape using the familiar sort first, plot second rendering pipeline. Program 2 lets you fly over a sample terrain model using the mouse, perhaps reminding the more experienced among you of the classic *Zarch*, but with more freedom of movement.

More detail close up

As a quick demo, Program 2 is adequate, but being satisfied with our progress is no reason to stop here. There are a number of improvements to be made, the first of which is to develop the idea of adaptive detail. The current process keeps the number of triangles used to represent the surface constant between foreground and background although any extra detail offered by the increased number of triangles is often lost by the perspective. Each call to the triangle plotter has a number of overhead costs, setting up the gradient values for example, so any calls we can eliminate without discernible loss of realism will speed up the plotting routine.

A common solution to this problem is to simplify the structure of the terrain net with increased distance from the viewer. This can be seen in action in the *Iron Dignity* game engine by Frank Foehl, particularly when viewed in wireframe... The difficulty of this technique lies in the need to perform the transitions between complexity levels seamlessly so the player is not distracted by sudden jumps in the terrain.

The problem occurs not in the increased steps over the less detailed sections but on the boundary between detail level changes. Modelling the terrain using fewer polygons alters the coordinates of all those vertices skipped over, forcing them to lie directly on the larger polygon. If we proceed without correcting this, we can form gaps in the surface (see Figure IVa).

Figure IVa: Incorrect simplification boundary (notice dark grey gaps in terrain)

Figure IVb: Correct simplification boundary (Circles indicate correct vertices)

To solve this problem the coordinates of these boundary vertices should be found not from the terrain model, but by linearly interpolating the neighbouring vertices of the less detailed structure (see Figure IVb). Program 3 demonstrates the improvement.

Sky and clouds

The next obvious step along the road to photo realism for our terrain plotter is to do something about the vast expanse of blue masquerading as sky. Yards of text has been written describing methods to plot accurate models of clouds, but this quick tutorial will have to make do with a simpler attempt.

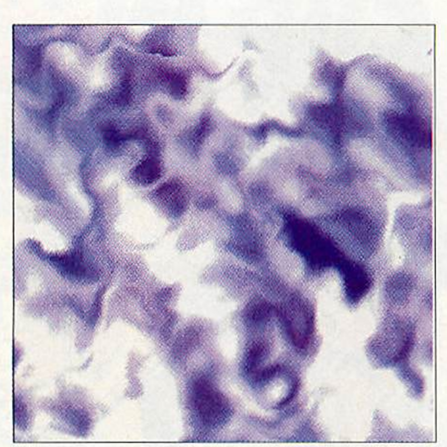


Figure V: Cloud fractal showing fractal based turbulence

Having discussed previously the relevance of fractals to terrain modelling, by a similar argument, they can also provide a useful basis for generating clouds. Different types of clouds present different properties to be modelled, so we are pretty much free to choose the type of fractal values we want; there is bound to be an example somewhere in nature of something similar to justify the result.

One of the more interesting features applicable to fractal clouds is turbulence in the fractal, that is the fractal is perturbed by some function, simulating the effect of wind currents acting on the clouds. To generate a suitable turbulence function we can use another fractal (useful aren't they?) By adding the turbulence value to the coordinates used for reading the initial fractal value, we can simulate the type of disruptance required. The cloud fractal is therefore defined by:

```
cloud_fractal( point ) =
    turbulence = fractal(point)
  = fractal(point+turbulence)
```

Where the scalar value of turbulence is added to each component of the vector point. An image of this perturbed fractal, rendered with a suitable blue palette is show in Figure V. To animate such a fractal we can add a frame counter value to specific components of point, essentially shifting the coordinates over time. To see this fractal in action see Program 4, but you'll have to wait until next month to see how to include it into the developing graphics engine. AU

Next month

Besides adding the cloud texture, the complexities of object movement and interaction within the 3D world will be discussed and a small playable game presented.

File your facts *Part two*

Mike Tomkinson sees what the Impact Professional relational database has to offer

In the March issue I looked at the new relational version of *DataPower* from Iota Software, now I'm going to look at the alternatives. I say alternatives because, as John Skingley of Circle Software has pointed out to me when I mention the lack of relational databases on the Arc, there has always been the *Impact* series.

We were once better served in terms of choice with *Squirrel* and *S-Base* but for a variety of reasons these are now also-rans. This is a shame as both were very promising and had a loyal band of followers who will, no doubt, point out that they are still going strong.

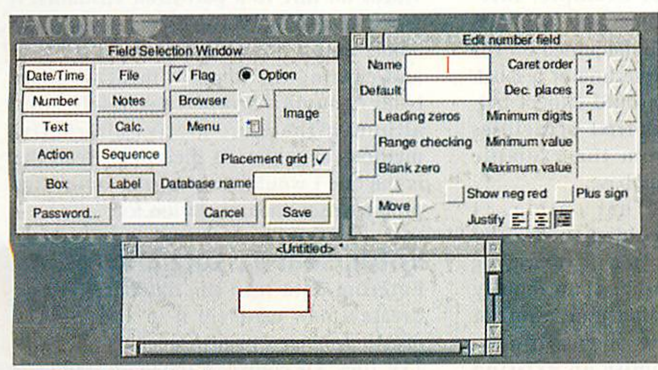
I disagree, not because they no longer exist but that support for them is less than strong. Acorn users, particularly power users, tend to need support for packages because alternative information sources, like the plethora of PC books, do not exist.

The version of the *Impact* family I will be looking at is *Impact Professional*, hereafter known simply as *Impact*. This version is fully relational and has the addition of fully programmable action buttons. I say additional because this is an extra if compared with *Impact Major* which is the other relational alternative from Circle. *DataPower 2* now has this feature so it is worth the comparison.

Installation

A major criticism of *DataPower 2* was the licensing arrangement for a single user. The one user/one credit system may be within the spirit of the licence and I agree that it is only a question of transferring the credit back to the original disc. However, for the business user who wishes to use the program at work and continue to use the same program at home this is not very convenient although Iota do provide a 'second credit' scheme for an extra £15.

Circle have a different method and provide the following alternative. The credit for the single user is installed onto a hard disc like the *DataPower 2* credit. At the same time the disc is initialised and this disc, the master disc, can also be used to run *Impact Professional*. It is not ideal but better than uninstalling credits simply to continue work at home. In fact the ability to uninstall and re-install the program properly is also a new feature of *Impact* and one which is very welcome. One of the least favourable aspects of the older version of *Impact* was the fact that once installed on a machine it was difficult to move it if, for example, you changed computer.



A card under construction

The program itself

Well that's the installation taken care of. So what about the program? What I really like is that even from the outset you, as the database designer, have so much choice. From the icon bar, Create does as one would expect and presents you with a card. This can be re-sized by double-clicking and setting the card attributes.

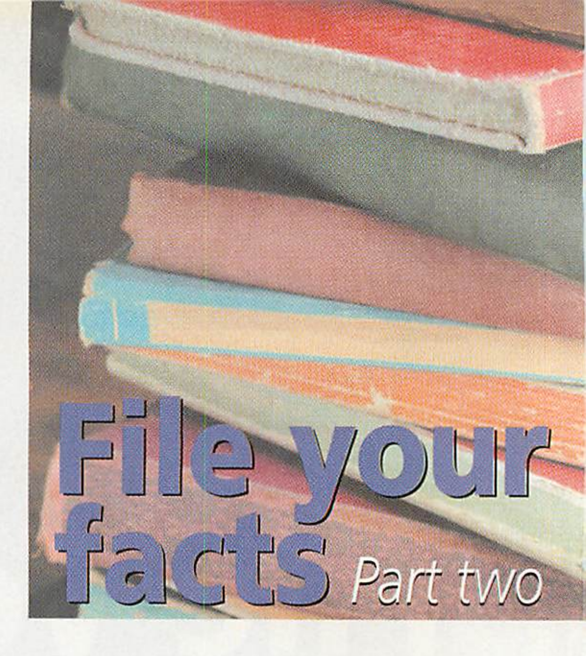
Perhaps this is slightly unfortunate terminology as an attribute means something different in the world of relational databases. A new feature is that the card background colour is now selectable via the RISC OS colour picker. A small point but most important as a user probably asked for this option and it was done.

This positive response from Circle cannot be over-emphasised – a program is only as good as the length of time which has elapsed since its last revision. A static program, undergoing no development, does not inspire confidence in the user.

Get reading

Rather than look straight at *Impact* itself I thought it best to look at the documentation first as my other major criticism of *DataPower 2* was the poor manual. I know that most of us would prefer to dive right into the application rather than reading a manual.

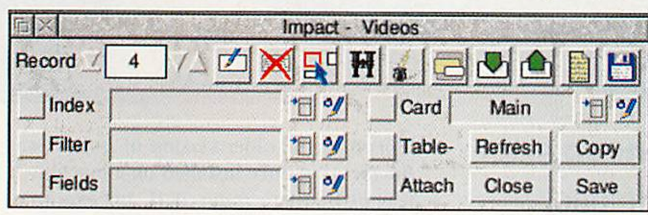
The acronym RTFM has been around long enough for most of us to realise not only what it stands for, but the exasperated sentiment behind it. We tend only to read the manual when we have to. In this case you have to – the program is neither intuitive nor will you get the best out of it by ➤



ignoring the manual. Fortunately the manual is good and shows the same level of improvement as the program itself – obviously both have been updated together. My version was the 5th Edition published in February 1997 and this is supplemented by an extra manual to cover any new features not dealt with in the main manual.

The manual is well laid out and easy to follow, taking a conversational tone without being condescending. No great assumptions are made about the level of user competence or exposure to other databases. This is good because *Impact Pro* does not have the look and feel of a true RISC OS program. It certainly has an individuality – the method of re-sizing the default card is a good example.

The usual RISC OS method of selecting the adjust size icon (bottom right of an open window) only works if you want a card smaller than the default – not if you want one bigger. I was heavily reminded at times of some of the little idiosyncrasies that *PipeDream* users used to love/hate.



The Control Panel

The tutorial section deals with a Video Shop example file which is included alongside the main program when originally installed so you are ready to start the guided tour of the main features. That said, it is as well the manual is good as *Impact Pro* has a steep learning curve. This is not any particular fault of the program but reflects the difficulty most users have in coming to grips with relational database programs after flat file ones.

On trial

To really test the program, as opposed to just saying what it can do, I decided to use the example relational database to run a video shop. This is an area with which I have some experience. John Skingley of Circle says that the majority of *Impact Pro* sales are to business users who require real solutions. Fortunately *Impact Pro* has a number of example databases including the already mentioned video shop. What an amazing coincidence.

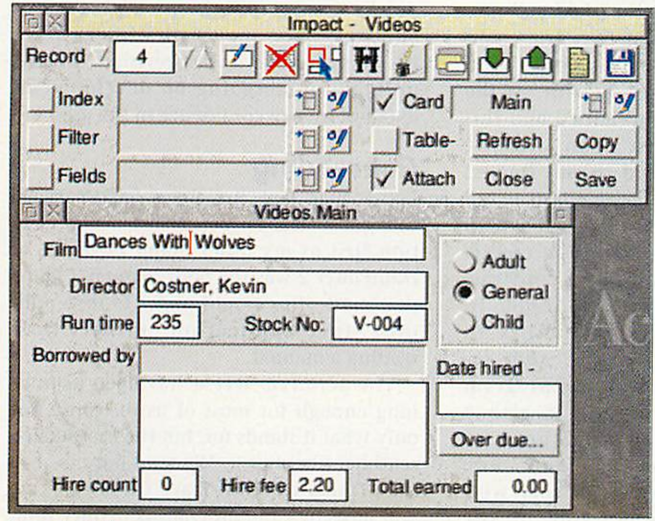
Most video shops use either bespoke systems or industry standard off-the-shelf solutions. Most are non-GUI/WIMP and while this may seem old fashioned it is actually a good solution in that you do not have to train shop assistants to drive a desktop before they can use the program. You can simply concentrate on the program.

For the sake of simplicity in this case we will assume that the program is only for handling videos. Most video shops sell sweets, blank videos, new videos and hire games for consoles.

It must be said that the example database may be a good example but it is a bad database. For example, names are stored in a separate Addresses database, hence the database is relational, but they are stored with Forename and Surname in one field. This would almost never happen as they need to be in two separate fields to allow an alphabetical sort on Surname.

Of course when writing a letter to a member asking for the return of an overdue video as a report from *Impact Pro*, we might want to address it to Mr Bill Smith (three separate fields – Title, Forename and Surname). It is possible to produce an alphabetical list sorted in surname order by using the Last Word when creating an index but a principle is a principle.

This is a slight annoyance as *Impact Pro* has what it calls Field Maps which allow the selection of certain individual fields from selected records. These fields can then be concatenated or joined to other fields so that, for example, forenames and surnames can be joined on the same line of a label. I would expect better first principles from the example database.



Example video card – Dances with Wolves is too long

That aside, I decided to use the actual example rather than modify it, but I was aware of the need to customise an existing relational database to make it more suitable for a particular task. The acid test had to be ease of use. If I put this database into a video shop how long would it take for any reasonably intelligent new shop assistant with no computing background to be able to use it?

We all know that RISC OS beats Windows in its various incarnations for ease of use. Perhaps the greatest feature, which we all take for granted, is drag-and-drop. Windows 95 finally implemented this but to those of us used to RISC OS 87 it seemed a little late. I would contend that the skills in driving the operating system or desktop part of using an Acorn could be acquired very quickly and certainly far faster than any other graphical user interface.

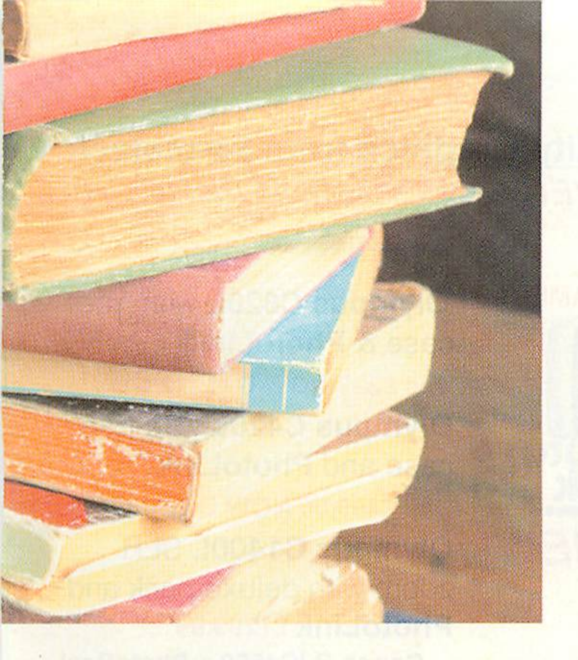
Impact Pro makes great use of drag-and-drop. Placing the cursor over any writable field on a card produces a ghost-like *!Edit* icon. This can be dragged and dropped anywhere and contains, as you might reasonably expect, the contents of said field. Thus, the booking out of a video to a customer simply involves dragging the customer details to the 'borrowed by' field of the Videos.Main database.

You might think it should be the other way round, that is video to customer, but remember one customer can have many videos. This is a good example of a one to many relationship. All that is then required is that the date of borrowing is entered in the date field.

The videos on loan to any customer at a particular time can be seen by using the List Videos button at the bottom of the customer card. A table will appear showing videos on hire to a particular customer. A video return is handled by pressing the adjust button over the 'borrowed by' field and clearing the item, in this case a customer name. Simplicity itself, and although there are always alternative methods of achieving the same effect, this is the one I would *recommend* for use and produce user documentation for.

Enter, search, sort and report

Entering data into the database is easy. Create a new card, fill it in and save the result. *Impact Pro* also accepts CSV and TSV files. Of course, a database stands or



falls upon its ability to do three things search, sort and report.

Searches are either simple or complex and on *Impact Pro* a simple sort is just that – simple. A more complex sort requires a look in the manual. The Search Tool is actually a search and replace although you do not have to do the actual replace. On the Control Panel this icon is shown as a pair of binoculars.

All the normal conditionals are there such as *Equal to* and *Not Equal to* but I could not find *Contains* – as in find all videos with the word 'man' contained in the title. This fooled me until I noticed the *Partial match* which performs the same task but only on text fields, where the case can be either sensitive or case insensitive. *Impact Pro* certainly passed this test with flying colours.

Sorting was another story. A simple sort to produce an alphabetical listing of customers sent me scurrying through the manual. It seems I had to create an index. All I can say is that I did it and even include a screen shot as proof, but it was not intuitive and the manual was actually less than helpful at this point. Perhaps I was missing something, but all my past experience of Arc databases screamed out for a quick click of the Menu button on the mouse and a sort menu.

Reporting is where *Impact Pro* comes into its own. A simple form of report is the table produced when you press the List Videos button of the customer file. This can be sent straight to a printer via the print button. The Send Letter button illustrates another form of report which *Impact Pro* makes great use of – the report generation via *Impression*.

This actually uses the Impulse module and, as the documentation states, with *Impression Junior* being in the public domain this should present no great problem to anyone. The third type of report is probably the most useful to business users, and that is the Label Printing facility. This is easy to use, providing you know what label stock you have, and invaluable in a business setting. I know people who use *Impact Pro* in preference to other databases because the printing of labels is so easy.

All the other features you would expect of a database are implemented including password protection. The lack of input masks on fields, particularly numeric fields, is a feature which I felt was missing from *DataPower 2*. Needless to say, *Impact Pro* has input masks so that, for example, maximum and minimum number can be applied as a form of data verification. The version I was using – *Impact Professional* version 1.44 proved remarkably stable given some of the things I was asking it do. In fact I only managed to badly crash the program once to the point of a reset.

Name
James Butler
J. R. Hartley
R. Higgins
Davy Jones
Captain J. T. Kirk
Mary Lamb
James Longbottom
Mickey Mouse
Major Paigne
Pastry
Jane Plain
Elizabeth Reynolds
Bert Rumblelow
George Sanderson
Simple Simon
Paul Skirrow
Bill Smith
Fred Smith
Charles Vicar
Hugo Walter
Jill Waters
Sam Weller

Well, I managed a sort

Conclusion

So what is the bottom line? As already mentioned, I have watched *Impact* grow through various incarnations and each has been a great improvement over previous versions. The product is now mature even though development has not stopped.

Impact is different both in its approach to RISC OS and its approach to relational databases. It would be churlish to make that sound too much like a criticism. Circle have been producing a relational database for longer than the RISC OS style guide has been around.

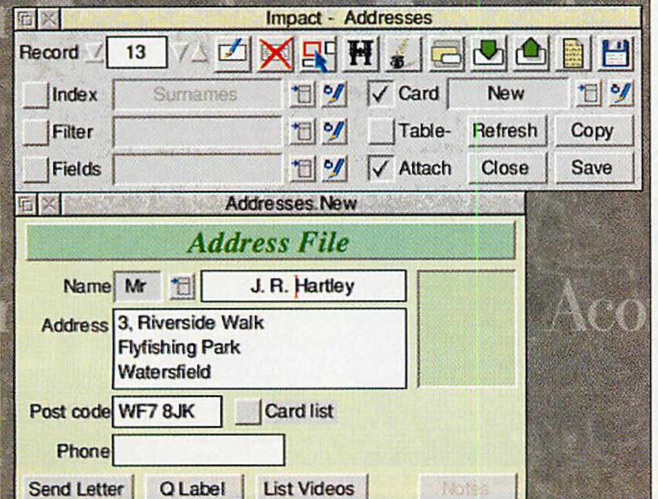
Users can certainly stand a few ground-breaking programs and it is my view that there ought to be a few more of them. I repeat my view that we are in danger of having great machines and nothing to run on them if the software market does not improve.

There are idiosyncrasies in the program and the learning curve is not as short as Circle might wish you to believe. Nothing comes cheap, however, and you are well rewarded for your efforts. I would certainly recommend it to business users looking for a relational database or even for a flat file with the ability to report as labels.

For education I would perhaps be more circumspect. It is so different from PC offerings and even from *DataPower 2* that it might not be worth the risk particularly with an A level project. Much of what is being taught at that level has to be transferable and I am not sure that the skills gained could easily be transferred, leaving the student with another steep learning curve as they migrate to other platforms/ packages.

I had a strong yearning for an SQL (structured query language) rather than the Index and Filters method. In some ways it may be less elegant but it is more standard – some will disagree and I have to say that it is often just a matter of choice.

Overall the benefits far outweigh the minor niggles and reservations. I would suggest that you take Circle up on their sample disc offer and try before you buy. AU



Example members card

Product details

Price: Impact Junior costs £65, Impact Major £95 and Impact Professional is £125. (All prices +VAT.)
Supplier: Circle Software
Address: PO Box 36, Bodmin, PL30 4YY
Tel/Fax: 01208 -850790
E-mail: support@circlesw.demon.co.uk

When I was testing the four SCSI 2 cards for the review published in the Christmas 1997 edition of *Acorn User*, Cumana were in the process of being sold to Cannon Computing, with the consequence that the well-established Cumana SCSI 2 interface was unavailable for testing. This review of that card should be read in conjunction with the original test of the Connect 32, Eesox, Castle and Power-tec SCSI 2 cards.

First impressions

Like the Castle and Power-tec cards, the Cumana interface boasts on-board flash ROM, facilitating software upgrades – an advantage over the Eesox card. It permits software control of termination of the SCSI bus, but like the Castle card features a non-polarised un-boxed internal SCSI connector, with inherent risks of misalignment and consequent damage to the interface or connected devices.

The documentation is perfectly adequate but lacks the clear illustrations and screenshots found in the Eesox and Power-tec manuals.

Cumana's configuration software is similar to that of its competitors, all features working as expected, except that a failed format caused a slightly premature end to the testing. One major advantage is the implementation of password-controlled access to the application, with further levels of security provided by CMOS lock and System lock facilities. While it performed all the necessary functions, it was not as intuitive as Eesox's *!SDirector*. However, the one-line help facility is a very useful feature.

Reading and writing

To test its speed with a large hard disc in addition to my varied Syquest drives, Cumana kindly lent me a 4Gb Seagate 'Hawk' drive, and by also running that drive off the Eesox card, comparisons with the results of the earlier review can be made.

As previously, my large-file test was to copy the 50Mb DISC370 archive found on the StrongARM upgrade CD from a HD to another directory on the same HD. Here, a somewhat unexpected result was encountered with every drive tested, in that results were far poorer than the 'headline' large file read rate would suggest.

Results of tests for Eesox and Cumana SCSI 2 cards

Seagate Hawk 4Gb drive:	Cumana	Eesox
Read/write 50Mb archive: (secs)	52.00	29.00
Effective read/write rate: (Mb/sec)	1.92	3.44
!HDspeed read rate (Mb/sec)	6.2	4.2

As the table of results shows, a reading transfer rate of over 6Mb/sec was obtained. However, the DISC370 test took more than 50 per cent longer than the other cards. Further tests proved that writing was always much slower than reading, the overall effect being to degrade real-life performance significantly.

Repeatable crashes

Soon after installation, I tried to use the Cumana card to back up my !Boot directory to a 105Mb Syquest cartridge. The system hung when writing one file. I tried again. Same problem. New cartridge; re-partitioned; low-level formatted; SCSI termination checked; a third cartridge tried; always the system would hang at that point, irrespective of what else was on the cartridge. The source file was fine, and copied on the IDE disc correctly. To eliminate the drive as the cause, I plugged in an ancient Syquest 44Mb drive; this time a different file hung the system.

I spent many hours trying to eliminate these problems, but failed. The Castle, Eesox and Power-tec cards had all worked impeccably with the drives in question. Cumana say that they know what the problem with old Syquests is, and that they will fix it.

After completing the review, I solicited comments on this problem from existing users of the Cumana card. While it is clear that the majority have no problems, for others the difficulties of using older Syquest drives with the interface have not been sorted out over quite a period of time. The problem may be related to DMA timing problems, an issue which could have been the cause of the slow writing which I noted above. However, during the two months I had the card, the problem was not solved.

Conclusions

Whereas the 'Unique Selling Point' of the Power-tec card is its ability to drive SCSI tape drives, that of Castle is their reputation for support, and that of the Eesox interface is its self-configuring and highly intuitive software, the USP of the Cumana card is their SCSI Manager's password-controlled protection system.

In terms of speed it clearly matches the Power-tec card for reading, and surpasses the Castle and Eesox interfaces, but only for larger drives, and not by a large margin. Its slower write speeds with a variety of drives remains a further problem, additional to that experienced with the Syquests. Unless its protection system is important for you, then it seems to offer no great advantage over the Eesox or Power-tec interfaces.

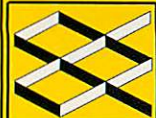
Contact details

Price	£135
Supplier:	Cumana (Trading name of Cannon Computing)
Address:	Whitegate, Dunmow Road, Hatfield Heath, Bishop's Stortford, Herts CM22 7ED
Tel:	01279 730900
Fax:	01279 730809
E-mail:	sales@cumana.co.uk

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Organiser

Organise *your life*

Mike Tomkinson tries out a computerised Filofax

I am always prepared to hate shareware. Sorry Paul Wheatley, but my experience has always been that nothing good is ever free – you pay at some point. That experience seems to make me a good person to review a piece of shareware called *!Organiser* from Chris Morison.

To be really accurate this piece of software is actually freeware in the sense that it will cost you nothing other than the price of downloading it from the Net. If things go according to plan you should also find a copy of it on this month's cover disc. So, no fee to register the program, no need to pay to upgrade to a full version and what you see is what you get.

You might think that this would automatically tend to make a reviewer both more sympathetic and less inclined to apply the same criteria as for a commercial piece of software. Wrong on both counts, I will judge it as I would any piece of software regardless of cost.

What is *!Organiser*?

You will get no prizes for guessing that it is an organiser in the FiloFax sense of organiser. Unfortunately this type of organiser became associated with the worst excesses of the 1980's boom – Greed is Good and that sort of thing, mobile phones and Yuppies. I always felt this was a little harsh, as the organiser was one of the better inventions of the '80s – a sort of permanently re-cycleable diary and almost 'green' for that reason.

I suppose that some Yuppies went overboard with organiser culture and the effect was parodied in the film *FiloFax* with James Belushi where the premise was that to lose your FiloFax was to lose your whole identity.

I still use mine every day and while I would not be lost without it, I would certainly miss it. *!Organiser* is the computer equivalent of the paper version. Once copied to your hard disc you have an electronic calendar, diary, anniversary and address book. Nothing too spectacular and we have seen all this before.

Where *Organiser* wins hands down over any other version I've seen is that it is very good. Many commercial programmers would do well to look at this as an example of a simple idea very well implemented. It is the level of thought and the excellent user interface which impress me most.

Installation

The program installs as a clock on the icon bar and the time is taken from the internal clock. You might have your computer set up to display the alarm clock as part of your boot-up sequence and not want another clock. No problem, because *Organiser* can be set via the copious Choices menu to display as the *Organiser* icon, a clock digital or analogue or free memory in kilobytes or megabytes. It is this attention to detail that initially impressed me about the program and at that point I had not used it as an organiser.

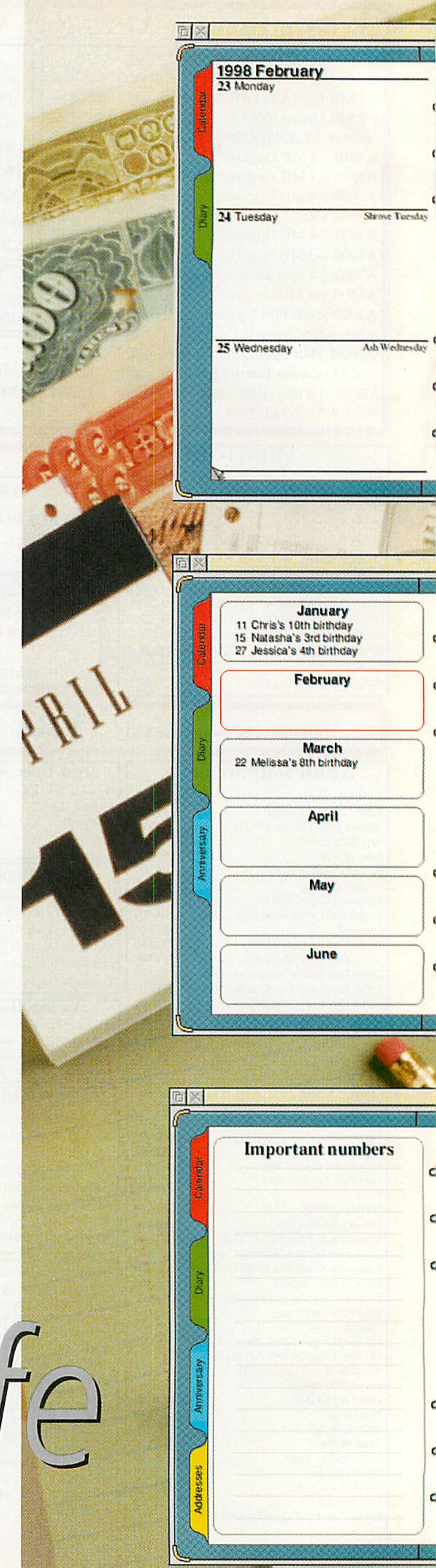
Calendar

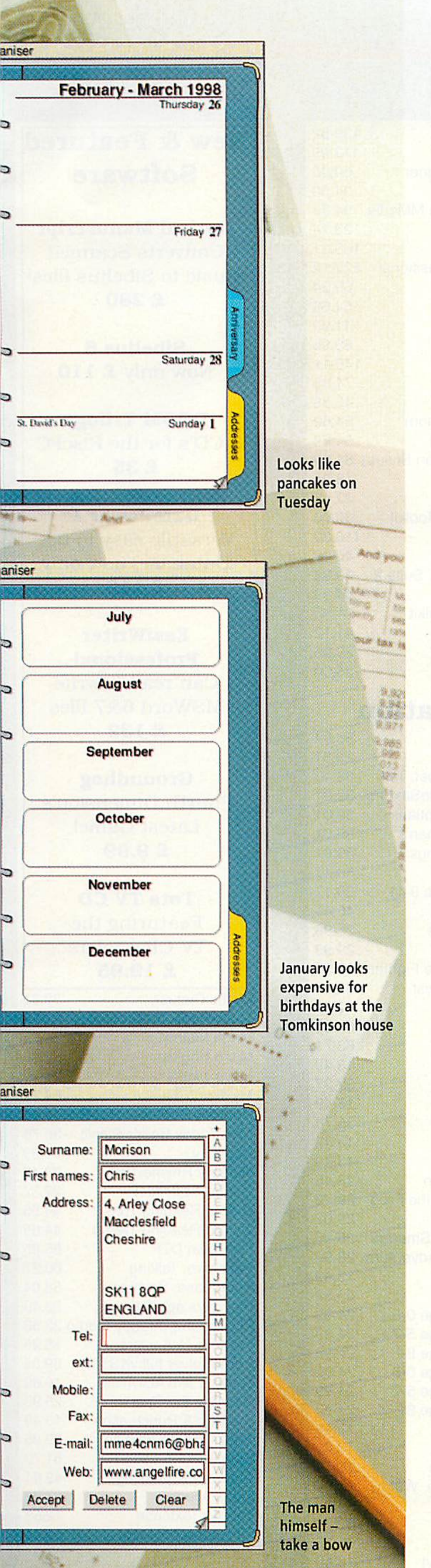
Dealing with the parts in sequence, the calendar displays the current year according to your computer, and the day is highlighted. You can turn forwards and backwards in time via the page turn icons at the bottom of each page. No worries about the Year 2000 and the day that PC owners have come to dread – New Year's Eve 1999 is actually a Friday.

View can be either one or two pages and navigation is also menu driven, allowing you to go to last year or next or enter any other year of your choice. I thought I would deliberately crash the program at that point by asking for the year 3003. It would have given me something to write about, but no – the calendar for the Year 3003 appeared almost instantly. The speed of the program was another factor in its favour.

The Diary

The diary, which is the main part of the program, displays a FiloFax lookalike on screen and you have the usual control over the display – either two weeks, one week or two days. You also have almost complete control over the colour of your organiser and, something I particularly liked, the





Looks like pancakes on Tuesday

January looks expensive for birthdays at the Tomkinson house

The man himself – take a bow

number of rings and where they are. I know it is useless but I liked it. It meant I could set up the screen version to look just like my paper version. Another small thing in itself that gave me greater confidence in the program.

The diary can be used as just that, or as a series of Alarms, or it can be used to automate the running of certain tasks. The help file gives the examples of backing up certain files or running virus detection programs.

Once again the user has a large amount of choice in how the program works and this is all explained via the help system. As you might expect by now you even have a choice of how the help is given, as a text file, as a *StrongHelp* file or as HTML pages. I decided upon *StrongHelp*, another Freeware program. You can find a copy of it on the *Acorn User* CD-ROM 3 in the Factory.Utilities directory.

The help files are not initially needed as the program exhibits a high degree of user friendliness. However, they prove useful in explaining certain aspects which will enable the user to get the most out of the program, for example, when automating tasks.

Anniversary

The Anniversary section is fairly self-explanatory and enables the user to store a record of birthdays and anniversaries. A high degree of choice is again available to the user particularly via the wildcards which can be used when setting up the various birthdays and anniversaries. Entries are automatically shown in the diary so there is no need to repeat the work in setting them up.

Address book

Finally there is the address book section which should suit most needs if left in the default settings. By now you will realise that if the default settings are not to your taste, you can change them. The address book has the ability to accept CSV files as imports and cut and paste from other programs. This is obviously very important as you might already have some of the data previously stored in, for example, a database.

A neat point here is that you have a degree of control over how the CSV is treated by *!Organiser* so that if you have a name in the format "John Smith" you can ask *Organiser* to separate that into First Name and Surname when storing it. Once again the help file gives very full details of the choices you have.

Getting the data back out of the address book is also possible so that the construction of a letter using a word processor/DTP package is eased by using the Paste at cursor option. I was not using e-mail or the Web on the computer on which I reviewed *!Organiser*, so I presume this is also method used to access this area of the sub-menu.

Perhaps this is the strongest point of advocacy for the program – it will enable you to organise data and tasks into one program rather than using a whole host of different programs and utilities. Certainly the program should be run from the !Boot.Choices.Boot.Tasks area if you are going to get the best out of it. Did I mention that the program is configurable so that you can have a your organiser in English, Danish, German and Dutch? I presume the last should be Flemish?

Gripes

I have only two – one specific to the program and one specific to the use of any computerised organiser. Firstly I would have liked the ability to print out any page. I know it would be possible as a screen shot and I feel that the Paste at cursor option of the address book should be a feature of the diary so that a simple hard copy can be taken.

The second point is therefore related to the first – the strength of the FiloFax was in its portability. A desktop organiser is fine for someone who spends a large amount of time at their desk. However, the very person who would benefit most from an organiser is the person who does just the opposite. As we have no portable Acorn we tend to be locked into desktop machines and are likely to benefit least from an organiser if we travel. Obviously that is no fault of this particular program.

Conclusion

You can draw your own conclusions as there is a copy of *Organiser* on the cover disc. My feelings are that this program is far better than many which some companies are trying to sell you. It has changed my general opinion about freeware with the assistance of *StrongHelp*.

The program would form an excellent part of any school GCSE project where pupils are asked to organise, for example the NDTEF/Learning Solutions Partnership pack *IT in the Home*. For small business use it would seem to be ideal. Chris Morison, the author of the program is to be congratulated and the latest version is also available from his website.

AU

Contact details

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WWW: www.angelfire.com/mo/chrismorison/

Product: StrongHelp
Author: Guttorm Vik
E-mail: Guttorm.Vik@eunet.no

Product: IT in the Home
Supplier: Learning Solutions Partnership
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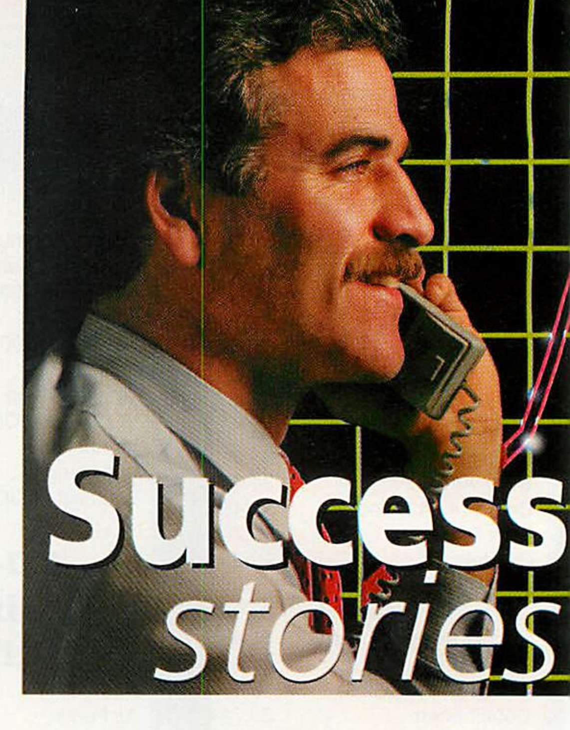
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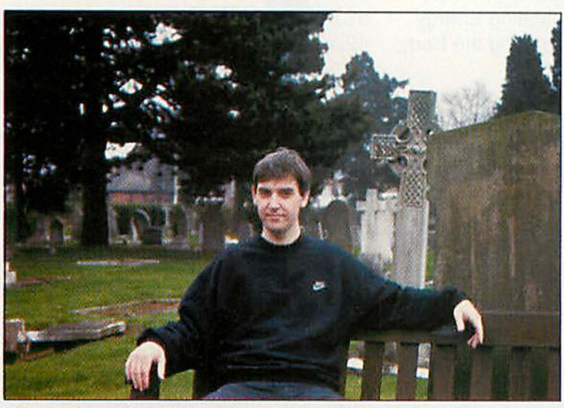
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In the late 1970s, Sheridan Williams used to write helpline columns for computing magazines. He was, however, by his own admission uncomfortable with hardware and hardware questions, and drafted in one David Graham to help with this side of the writing. David and Sheridan corresponded by letters addressed to PO Boxes for a couple of years, before deciding that a face-to-face meeting was long overdue. When they arranged the meeting, they were amazed to discover that they lived two streets from each other in St Albans.

David Graham was a *nom de plume* for Lee Calcraft, and the pair became the best of friends. They headed a couple of computer Users' Groups – including one for ICL – before the arrival of the BBC Micro, which they decided to support. Thus was the BBC Micro Users' Group, or Beebug, born.



Ian MacDougall, Software Manager

The group expanded very rapidly. For the first half year of Beebug's life no one could get their hands on a BBC Micro because demand was far outstripping Acorn's production. Nonetheless, everyone was clamouring for information, and Beebug found themselves inundated with curious would-be Acorn users.

The shop on Hatfield Road

These days, Beebug are probably best known as one of the few places with a shop front that sells Acorns. Their shop on Hatfield Road in St Albans, with the trademark Beebug canopy, allows people to wander in off the street and look at Acorn machines and software. Although they now also have a large PC section, it's a welcome antidote to the likes of Dixons which, even when they still sold Acorns, was sometimes rather too keen to sell customers a PC instead.

'We just don't need, and we never have needed a shop front,' admits Beebug's Managing Director, Sheridan Williams. 'In fact, our previous two offices in St Albans didn't have a shop area. But when we moved here we decided that as we did have a potential shop front we might as well use it.'

Beebug are a very highly regarded local dealer. They consistently poll well in, and have won, the *Acorn User* reader's survey and are one of the select band of dealers to have weathered Acorn's shake-up of the dealer system about three years ago.

For those of you that don't remember, Acorn formed Acorn Education, a subdivision which was set up as the exclusive provider of Acorns to schools. This they did through their agents, which were drawn from existing Acorn dealers, but by no means comprised all the dealers or Acorn Education Centres around at the time. While other dealers could still sell Acorns into schools, they would be undercut by Acorn Education Agents.

Beebug were one of the chosen Acorn Education Agents, and when Acorn Education became Xemplar in a joint venture with Macintosh, Beebug became an Xemplar dealer. They have since left the scheme. While Sheridan acknowledges that the idea was sensible, in practice he found that he could get Acorns more cheaply through other channels than through Xemplar. Some of the restrictions were irritating too; in some cases Beebug were able to sell computers to a school but weren't allowed to install their network, even if the school wanted them to.



Beebug's shop in St Albans

Enthusiast support

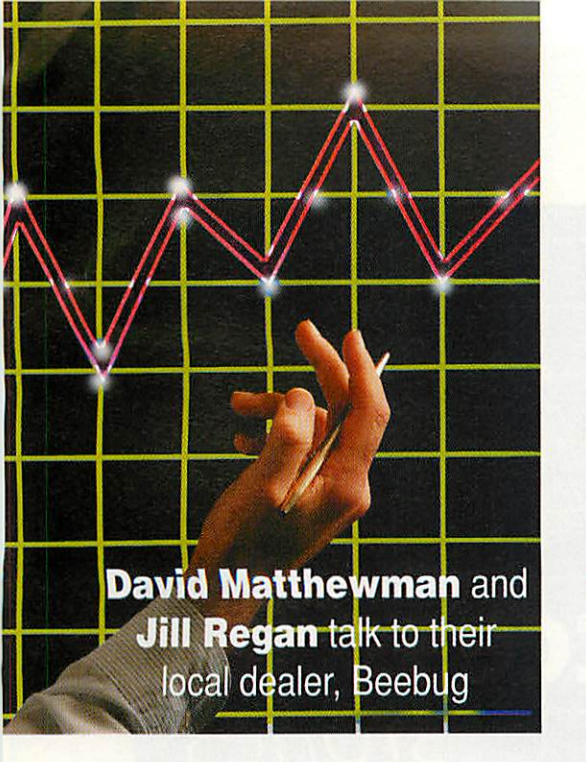
Shortly after Acorn announced the Acorn Education venture, they revealed a similar scheme for enthusiasts, based on so-called Centres of Technology (CoTs). Unsurprisingly, Beebug were signed up for that from the start, and remain a CoT today. Sheridan thinks the enthusiast market is very important to Beebug, as befits their Users' Group roots.

'I think the enthusiast market is one market that is still holding up. We always try to get something in the Clan mailing, and we find that's very effective for us. Clan people are very attuned to what's going on, and many are true enthusiasts going back to the BBC Micro days.

'Any computer where you can program in a language that's built-in to the computer, get into things, change things and yet not totally destroy the OS because it's all built into ROM is marvellous for the enthusiast, isn't it?'

Past glories

The original *Beebug* magazine ran well into the '90s but, as it was concerned exclusively with Acorn's 8-bit range, it was eventually sent into an honourable retirement. Not only was the magazine an essential source of information and tips for BBC Micro and Master users, but the



accompanying tape contained many useful and fun programs. I fondly remember navigating a blocky spaceship round a Mode 7 maze, collecting letters of the alphabet and dodging flashing chequerboard patterns, all at a breakneck BBC Assembler speed. Not quite *Doom*, but highly addictive gameplay.

Beebug also published a series of books, including *WIMP Programming for All*, *File Handling for All* and the more recent *PC* and *Internet Survival Guides*. The latter were in a cheaper, 'glossy pamphlet' format with a much smaller print run than the earlier books, which had sold between five and ten thousand.

'We thought that was the way forward,' explains Sheridan, 'but the market is still too small. A publication, to be viable in the kind of form we did it which is not particularly sophisticated, needs to sell 2000 copies to break even, basically. Both those publications *only just* touched that.'

This is a shame, because the original idea had been to do a reprint with a supplement to keep the guides up-to-date as soon as the first print run had been exhausted. This would have been a reasonable way to follow the constantly moving targets of using the PC card and the Internet on the Acorn platform. Unfortunately, it appears that the Acorn market is now too small to support even the *Survival Guides*, although that may just be a reflection on the fact that so many people these days get this sort of information from the Internet itself.

To prove their versatility, Beebug have also produced a number of hardware products. Memory upgrades, a high density interface – there was even talk at one point of an internal modem card.

I mention these past Beebug achievements not to suggest that Beebug's best days are behind them, but to remind everyone that Beebug are a highly versatile company, capable of changing with the Acorn market. Fortunately for a company that was originally quintessentially 8-bit, they embraced the arrival of the Archimedes and positioned themselves at the heart of Acorn RISC computing. If you're a long-term reader of *Acorn User*, look back at past Beebug adverts to see just what a varied range of products and services the company have offered over the years.

Software development

The original BBC Micro Users' Group offered, as Users' Groups will, discounts on software and hardware to their members. Soon, as often happens, Beebug started selling their own products as well. Over the years they have sold a wide range of software, and this is an area that's very much alive and well today.

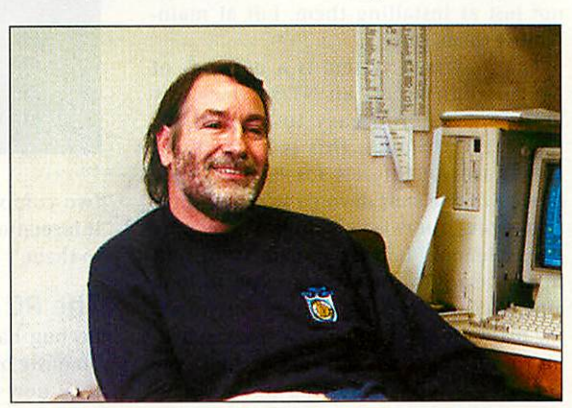
The product line has been rationalised a bit recently. Development is now concentrating on two key products, the *Sleuth* family and *Ovation Pro*. Development on both of these is continuing apace, with *Ovation Pro* being regularly updated, and attracting converts from *Impression* all the time as a result.

'We've got quite an extensive range:' explains Ian MacDougall, Beebug's Software Manager, '*Easy C* and *C++*, *MasterFile*, the *Hard Disc Companion*. We'll continue to sell the old *Ovation* – we still sell a lot, especially into Primary education because it will run on a 2Mb machine.

'We go into a lot of schools which have only got A3000s – with the odd A5000 as their flagship machine – and *Ovation* sells well into that. Our pricing on Primary licences is quite attractive. It's unlikely that anything more's going to happen on the *Easy C* front. The problem there is that the programmer has moved to the States and is now working for Sun. Basically he's too busy to continue development.'

Although the loss of John Wallace as Beebug's software manager was an obvious setback, causing Ian to concentrate on *Ovation Pro* at the expense of *Sleuth 3* for a while which delayed the next release of the OCR package, *Sleuth 3* is now Ian's top priority.

Ovation Pro is, of course, written by that one-man programming team David Pilling, who also supports the program via the *Ovation Pro* mailing list. That is, as Ian puts it, 'Quality support' – support from someone who knows the program intimately and is best positioned to act on suggestions.


Sheridan Williams, Managing Director

Very little of Beebug's software is written in-house, although it used to be in the BBC days. These days Beebug rely on trusted freelance programmers: David Pilling for *Ovation Pro* (and, of course, *Hearsay*) and Graham Jones for *Sleuth*. Interestingly enough, Ian MacDougall has never actually met either of them.

'There's a chance that I'll meet David, but Graham lives about as far north as you can get without being in John O'Groats,

Company profile

Beebug are based in St Albans, although some of their staff are scattered across the country. The staff list is as follows:

Sheridan Williams:	Managing Director
Adrian Calcraft:	Director
Lee Calcraft:	*RISC User* Editorial Consultant
Richard Hallas:	*RISC User* editor
Sarah Shrive:	*RISC User* Production editor
Randolph Morris:	Shop Manager
Val Baynham:	Secretary/Receptionist
Andrew Read:	Retail Coordinator
Ian MacDougall:	Software Manager
Paul Bates:	Engineer
Daniel Barron:	Senior Technical Assistant
Graeme Batelle:	Technical Assistant
Julian Burman:	Freelance Educational Network Sales
Sue Calcraft:	Network Administrator
Address:	117 Hatfield Road, St Albans, Herts AL1 4JS
Tel:	01727 840303
Fax:	01727 860263
E-mail:	sales@beebug.co.uk
WWW:	http://www.beebug.co.uk/

As a dealer, and part of the Acorn Software Network, Beebug will sell almost any Acorn-related item. Their own-brand software range includes the DTP package *Ovation Pro* (its cheaper predecessor *Ovation* is also still available) and the OCR package *Sleuth 2*.

➤ and the likelihood of my ever being up there at a time that's convenient for him is pretty remote.'

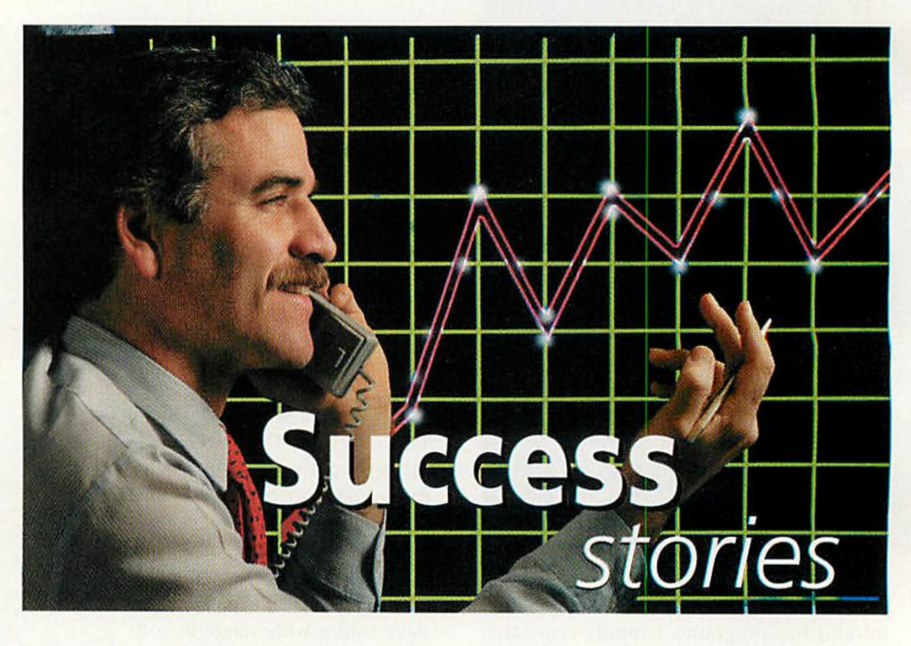
The Network era

There is a tide in the affairs of Acorn which, taken at the flood, leads on to networking, not just between Acorn machines but across platforms. There could be no firmer confirmation of this than BETT, where the Xemplar stand had Acorn machines connecting to everything imaginable, and even the Microsoft stand had a Risc PC among its multi-platform display. Beebug are riding this tide well, emerging as a specialist in large school networks, not just at installing them, but at maintaining them, too.

The preferred system is a network of Acorns running off an NT server – low maintenance and easy to administer remotely. Although this is a relatively recent area of interest for Beebug, they now have five staff devoted to it full-time, and even operate a scheme whereby poorer schools 'borrow' a member of staff from Beebug for one day a week to look after their network. It's a very busy area; the reason that this interview was rescheduled from Christmas was that Beebug were simply too busy installing networks in schools over the Christmas holidays to talk to us.

Beebug's commitment to the new direction at Acorn is evident in the fact that they were among the first companies to advertise the Network Computer. It would be pleasing to report that Beebug have sold hundreds of NCs and made a tidy profit out of their initiative; unfortunately it would also be inaccurate to report this.

'I think the NC is currently about £100 overpriced, but that'll come down in time,' Sheridan predicts. 'Video recorders and CDs all show what the market will do given time. I think it's probably the way forward. We seem to be going back to the old IBM idea of there only being one or two computers in the world holding the information, with everyone else linking up to them.'



The PC market

Beebug have been criticised – quite venomously by some people – for the fact that they now sell PCs and PC software. They are hardly the first Acorn company to do this, but perhaps being a company so firmly associated with Acorn they have come in for more criticism than others.

'It was either immediately lose three or four staff and just accept it,' Sheridan points out, 'or ... but you see, the thing is that it's not *us* who are leading; we're responding to demand. Someone comes to us and says: *"I've got an Acorn computer and I'm very happy with it. I want another computer for my son – do you sell PCs?"* It seems ridiculous to tell him to go somewhere else when we're a computer company, and can support PCs just as well as we can Acorns.

'The Acorn side would have suffered too, because as the company had got smaller we'd have had less technical resources, and would have ended up just with the ability to sell machines as a pure box-shifter with no technical support.'

Good service

A commitment to good customer service permeates throughout Beebug's work. This is hardly unusual in a successful Acorn company, but perhaps carries a trace of Beebug's origins as a Users' Group.

'On the software side, in a way our support is too good,' Ian claims. 'It's a question of striking a happy balance between fixing problems and giving people the advice that they need, without it costing too much.' David Pilling's an obvious example of this; he could spend 24 hours a day on the mailing list (and sometimes it almost seems as though he does) but that would leave him no time to continue development.

Ian attributes Beebug's success in the software market to good design, by which he means getting the user interface right so that, for instance, a hugely complex program like *Sleuth* 'just works' from the user's point of view.

'In some ways, hiding the complexity of the program has done us a disservice. There have been other products around that have all sorts of bells, whistles and options that don't work, and our product does, but because it has fewer options people think that it's a simpler program. In fact, the converse is true.'

Customer Service is equally important to Sheridan, and he takes an active interest: 'As a company we're small enough that if someone phones up with a order, and no one's available, I'll take it. I quite like going downstairs and working on the shop floor because otherwise I spend all day pen-pushing.'

On a broader scale, this flexibility is probably what's helped Beebug to flourish. They constantly re-invent themselves, staying in step with the Acorn market as they do so. AU



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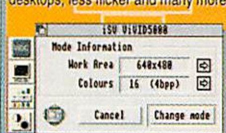
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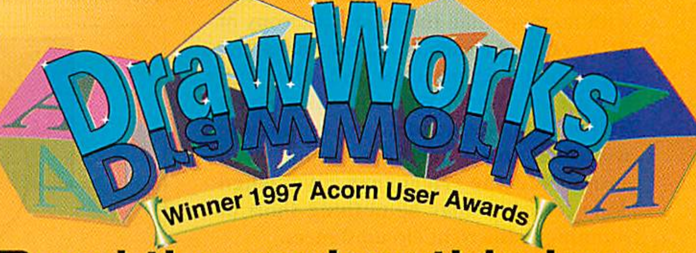
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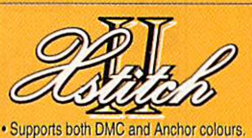
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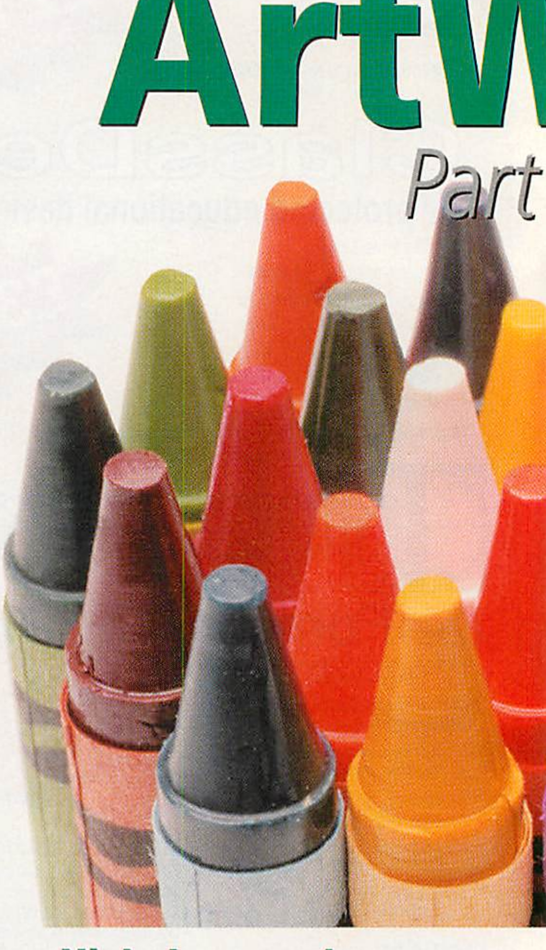
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The ArtW

Part



Nicholas van der Walle of Astute Graphics pushes the ageing ArtWorks one step further by generating the illusive transparency effect

Transparencies. Take one deep breath, open a new *ArtWorks* window and take the plunge. Let the fear overwhelm you.

Why do *ArtWorks* users perceive transparency effects as being the stuff of legends? I've been drawing them for years with no more than the most basic copy of *ArtWorks* and a calculator. Transparencies are so simple in principle and now, with the use of Martin Würthner's *Intersect ArtWorks* add-on module in conjunction with *Phantasm*, they have become even easier. And the effect they give, when done correctly, may be nothing short of stunning in the right circumstances.

In principle...

First, back to school on the theory of colours. The following guide may not be mathematically perfect, but it does produce visually correct results in the shortest time.

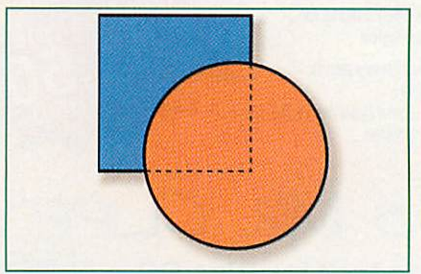


Figure I: The starting point

We shall start with a simple circular orange lens partially obscuring the view of a matt blue rectangle. See Figure I. For the simplicity of looming calculations, both colours were created in the CMYK colour model with the GCR principle in place (see box). The orange colour was composed of the values 0 per cent cyan, 35 per cent magenta, 60 per cent yellow and 5 per cent key, while the matt blue of 45 per cent cyan, 25 per cent magenta, 0 per cent yellow and 20 per cent key.

If the orange lens were to become 50 per cent transparent (or 50 per cent opaque, depending on whether your glass is always half empty or half full...) then the overlapping area would appear transparent. The appearance is only produced through adjusting the intersecting fill colour appropriately and in this case it would mean a colour shifted 50 per cent from matt blue to orange. To calculate this in terms of CMYK, simply use the following formulae:

$$C_T = ((C_U - C_L) / 2) + C_L$$

$$M_T = ((M_U - M_L) / 2) + M_L$$

$$Y_T = ((Y_U - Y_L) / 2) + Y_L$$

$$K_T = ((K_U - K_L) / 2) + K_L$$

...where C_T is the resultant cyan value of the transparent intersection, C_U is the underlying colour cyan value (in the case of Figure I the cyan value of the matt blue square) and C_L being the "lens" cyan value. This principle is used for the other three separation of magenta, yellow and key.

Once each CMYK transparent value has been calculated it is then best to apply GCR to the resultant colour.

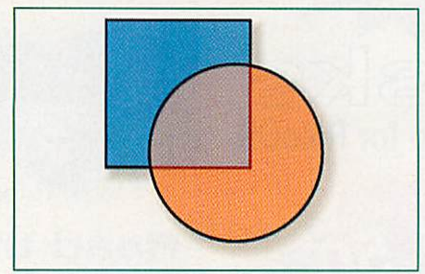


Figure II: See how the intersection area has changed

In the case of Figure I, the resultant transparent effect intersection area would then be filled with 0 per cent cyan, 7.5 per cent magenta, 7.5 per cent yellow and 35 per cent key. This is illustrated in Figure II, where even the black line colour of the square has been intersected and had the transparency calculation applied to it for added realism.

Easing the process

When you start intersecting many objects, all with different fill colours, it can become rather tedious, hence the introduction of *Phantasm*. One of the colour table manipulation features of this application is to automatically calculate a selection of colours so that they are shifted to either an imported named colour or a selected one using the standard Acorn colour picker. GCR is then automatically applied to any CMYK colours which may then be chosen to be outputted in that particular colour model.

Figure III shows the simplicity of creating the previous orange lens example using *Phantasm*. The two objects (the matt blue square and the orange circle) were copied to clipboard then pasted onto a new sheet. Next, the two objects were intersected using the *Intersect* module and ensured that the fill colour was

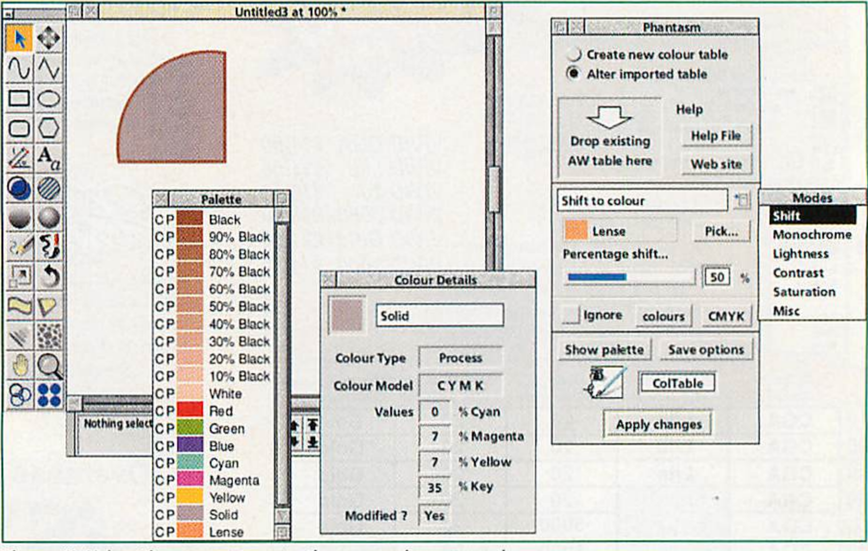


Figure III: Using Phantasm to create the orange lens example

art of orks three

matt blue. The colour table was then exported directly to the *Phantasm* main window (on the right of Figure III) and shifted to the named colour "lens" (orange) by 50 per cent. Note that no colours or separations were ignored by *Phantasm*.

After applying the changes in *Phantasm*, the resultant colour table file was dragged straight back to the original *ArtWorks* window with the intersected profile which then instantly assumes its modified colour "Solid". Note how the line colour of Black is also subtly altered to a colour mid-way between the shade of orange and true black.

Once the intersected profile has been altered correctly in terms of colour, it is copied once more to clipboard and pasted back into the original drawing and positioned in order to produce was seen in Figure II. The new colours created by *Phantasm* are just appended to the original drawing's colour list.

Limitations and freedom

By knowing the limitations and freedom of using the combination of *Phantasm* and *Intersect* in order to generate pseudo-transparencies, it is possible to compensate and take advantage of the conditions in order to create professional effects. Here is a quick list of such pros and cons:

Pros

- It allows *ArtWorks* to easily generate transparencies for the first time since its launch in 1992.
- The resultant pseudo-transparencies are backwards compatible with all *ArtWorks* file-loading software such as *Impression* and *Ovation*. This is due to the fact that they are not a new object type as is the case for *ArtWorks* additions such as *Hatches* and *Polygons*.
- It is possible to overlay a number of transparencies with various coloured filters.
- The complexity of the drawing with filters is only limited by the *ArtWorks* file size that your computer's memory can handle.

Cons

- The results are not dynamic – i.e. they are static and will not alter according to a change in conditions such as a new object being placed underneath the "lens".
- Memory requirements will go up as transparencies are created in this manner by overlaying existing objects as well as introducing new colours.
- Blends have to be converted to individual paths.
- The effect doesn't work for underlying bitmap images within *ArtWorks* as they do not enter each pixel colour into the colour table (although 256 grey-scale sprites place the top colour into the colour table which may be altered). However, please note that even the latest version of *ArtWorks* is unable to correctly handle deep sprites in terms of printing, so it is best that they are overlaid in, for example, a DTP package.

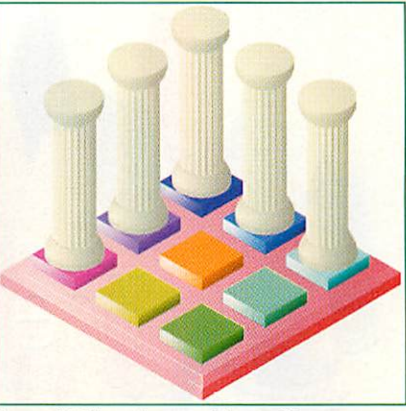


Figure IV: The columns without effects

Transparently complex

Taking all the previous knowledge a bit further it is possible to create images which use the principle of transparencies but offer alternative results, rather than a typical glass effect. This is the case of the next example where a shadow effect shall be created to ➤

Grey component replacement (GCR)

The concept of GCR is discussed within the documentation supplied with *ArtWorks* (*Commercial Printing Guide* issue 1.1 page 27) and has been overlooked by many. Although theoretically accurate in a perfect world, the reality of this method is a bit more dubious, but it is nevertheless simple and effective to a large degree.

When colour printing using a CMYK-based printer (which most are) be it commercially or on your desktop, it is possible to create colours in two manners;

- By using overlaying CMY inks to generate all shades including tints of black and black itself (used on early colour inkjet printers which did not have a separate key cartridge).
- By substituting percentages of each CMY colour with a percentage key (black).

For the first example, the two methods of creating a turquoise shade are to: (1) Specify 100 per cent cyan, 25 per cent magenta, 25 per cent yellow and 0 per cent key or (2) Specify 75 per cent cyan, 0 per cent magenta, 0 per cent yellow and 25 per cent key.

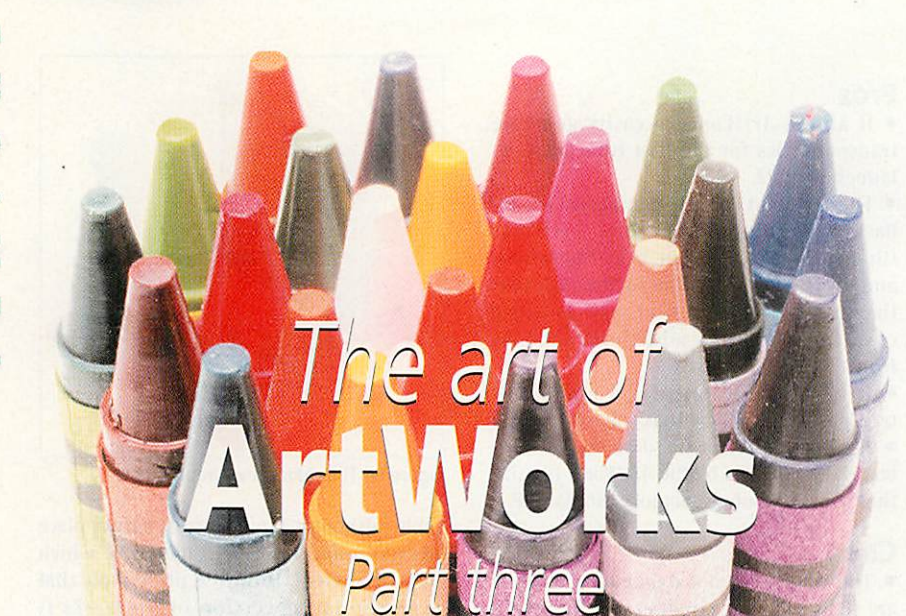
In the second example, it is possible to create a 75 per cent tint of black in the CMYK colour model by either using 75 per cent cyan, 75 per cent magenta, 75 per cent yellow and 0 per cent key or by just laying down 75 per cent key and leaving out the CMY colours altogether.

Try creating these two colours by using both methods and see how they match within the *ArtWorks* display window. The reason that one would want to introduce more key ink by reducing percentages of the other three separation colours is that less ink is put on the paper in order to create the same effect.

This helps eliminate the soaking of the paper and should produce crisper results with vector graphics (not always the case with photo reproductions, but that's another topic). It also ensures that shades of black are true black, whereas composing black out of CMY would usually produce a dark muddy brown.

ArtWorks allegedly automatically conducts a GCR operation for all colours created using the RGB or HSV model when having to convert to the CMYK model. (I quote allegedly as when you create a colour using HSV or RGB and then switch to the CMYK colour picker/adjuster, the presence of GCR is not apparent.) However any colour created or adjusted inside/outside *ArtWorks* in the CMYK model will not adjust itself to this optimum setting, therefore it is best to know how it is done manually.

To manually bring into effect GCR, the colour must be in the CMYK model and each of the CMY values must be greater than zero. Take the lowest value(s) of C, M or Y and deduct this percentage from each (thereby leaving at least one separation with zero per cent). Then add this value to Key, obviously with 100 per cent being the limit.



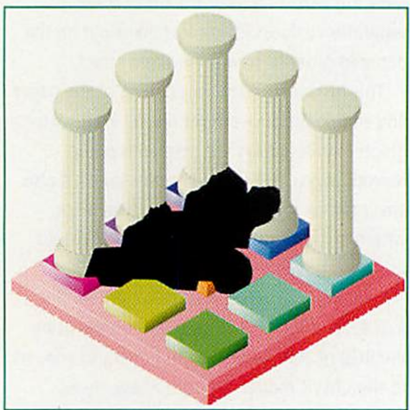
The art of ArtWorks

Part three

make Figure IV more realistic. The idea is to create a set of shadows that the columns would cast over the multi-coloured base.

As the shadow falls on many different coloured objects, some with radial or linear fills, adjusting the colours manually for each would take many hours. Therefore in order to generate a shadow effect, *Phantasm* will be used by shifting the shadow intersection area to Black by 25 per cent.

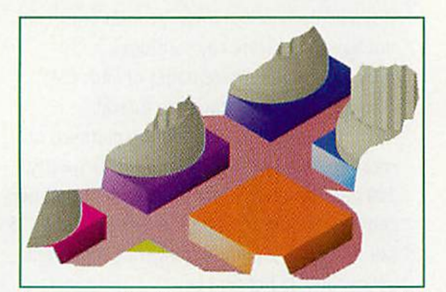
Firstly, group all the objects (in this case, the contents of Figure IV). This is done so that the *ArtWorks Intersect* module can clip a path to a full drawing rather than to a single object. This will also mean that all intersected profiles will retain their original colour.


Figure V: An approximate shadow profile

The next stage is to draw an approximate shadow profile as can be seen in Figure V. Try to draw it realistically by remembering where the light-source would be in relation to the existing drawing and take into account all surface undulations. An absolutely exact shadow profile is a bit excessive and the results are not always worth the effort.

Ensure that the shadow profile is closed, although a fill/line colour makes no difference. One further note is that as this profile is going to be used in conjunction with *Intersect*, it is advised that the profile contains few bezier curves as *ArtWorks* doesn't allow the intersecting profile to be too complex, regardless of the amount of memory installed in your machine.

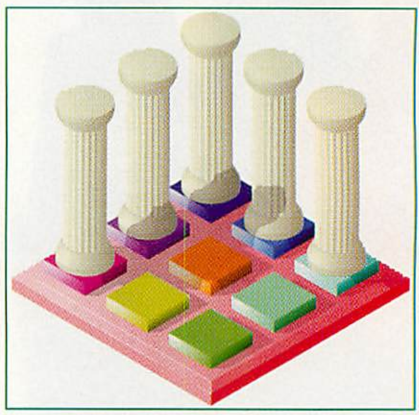
Then copy the original grouped drawing as well as the shadow profile to clipboard and paste onto a new drawing. Export the colour table from *ArtWorks* into *Phantasm* (which has either been Reset from the icon bar or freshly loaded) and ensure that the Shift to colour table alteration mode is selected. Set the percentage shift as 25 per cent and the colour to shift to as black.


Figure VI: See the different tones in the shadow profile

Apply changes within *Phantasm* and export the colour table back to the new pasted drawing. All the colours will alter to a darker shadow tone automatically. Upon doing this, select both the drawing and the shadow profile and "Intersect with top" using the *Intersect* module. This should result in an effect shown in Figure VI. In *ArtWorks*, group these resultant objects and copy to the clipboard, pasting it back onto the original drawing. Manoeuvre the pasted group into its correct position (use the original shadow profile and the Alignment feature within *ArtWorks* to do so easily and accurately).

By going through this procedure a possible number of times (depending on the drawing) ensuring that all shadows are catered for, the result will resemble that of Figure VII.

Please note that due to the space restriction of these articles, I am unable to go into greater depth on this matter. However *Phantasm's* documentation goes further into the theory and practice of this method of creating pseudo-transparencies. Also, Martin Würthner's *Intersect ArtWorks* module has some documentation on the use of that particular module, and it is well advised that you read it.


Figure VII: Columns with shadows for a more realistic effect

Next month...

In the final instalment of this series, I shall be going into miscellaneous techniques that would be of use in general as well as specific drawing conditions. *ArtWorks* is still a fairly versatile illustration tool and techniques learnt on this system could well be used on any future Acorn professional vector package. AU

Further reading

It's been mentioned before, but the Astute Graphics' website has a number of *ArtWorks* tutorials for all to see. It should have been updated by the time this goes to press and will contain additional material to compliment and expand on this series.
The tutorials may be found at;
http://www.astutegrfx.demon.co.uk/
It is also possible to e-mail me with comments or suggestions of topics for me to cover in the last issue by sending messages to: nick@astutegrfx.demon.co.uk

Product details

Product: Intersect
Supplier: Martin Wüerthner Software
Price: £10
Address: Mannheimer Str. 18, 67655 Kaiserslautern, Germany
Tel: +49-7034-928986
E-mail: wuerthne@trick.informatik.uni-stuttgart.de

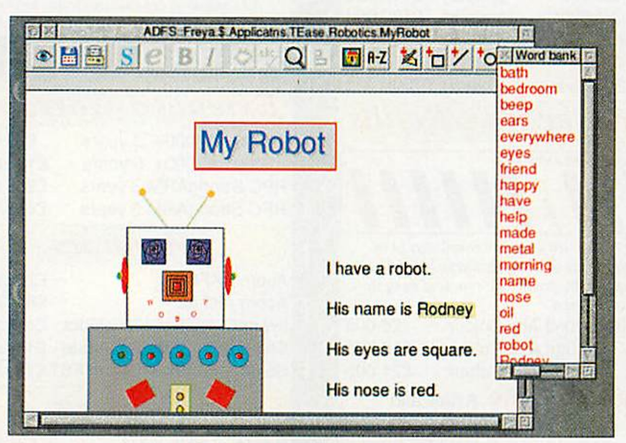
Product: Phantasm
Supplier: Astute Graphics
Price: £17.50 fully inclusive
Address: 40 Primrose Close, Ross-on-Wye, Herefordshire, HR9 7RN
Tel: 01989-567350
E-mail: nick@astutegrfx.demon.co.uk
WWW: http://www.astutegrfx.demon.co.uk

A rose by any other name

Pam Turnbull reviews a wordprocessor which thought it was a DTP package and has now stolen the clothes from Web page designers

It's difficult to know when to review a constantly developing product such as *TextEase*. Geoff Preston looked at it last in January 1997. It started life as an economical and ludicrously simple-to-use wordprocessor; you just put the text where you wanted it – as you would on a piece of paper – adding drawfiles and sprites at will.

Then along came *Talking TextEase*, which allowed you to hear the help line and listen to your words being spoken using Jonathan Duddington's *Speak* module. This was followed by *Multimedia TextEase* which supported animations in Ace film format, Replay files or sequenced sprites. And if you've a mind to, these animated files can be resized in situ and put at a quirky angle. The technically-minded couldn't believe their eyes and it was just what the novice expected and needed, so it's not surprising *TextEase* has been so successful.



The spelling checker highlights words it doesn't recognise and the Word Bank lets you add words to your page by simply clicking on them

Putting usability first

You can still buy the three versions of the program, but I'd opt for *Multimedia TextEase*. This includes significant enhancements (these don't have to be used, or seen, but do give you the option to add video, animation, sound and links between and within documents). This is a great package to put a new computer user on, but the lack of complication can initially cause confusion for the more experienced.

As with earlier versions, you start typing where you want, double-click on your words and a box appears around it which you can enlarge with the Adjust button (the text grows to fit). You can change the aspect of the text by holding down Ctrl as you drag or use Select and drag to change the wrap/column width.

Text can be read and you can specify the voice and how words are spoken while a spell-checker highlights the words it doesn't recognise. You can edit, delete, highlight and embolden or italicise, cut and paste, justify or move position, change line and paragraph spacing, column width, colour, margins and tabs with a click on the button bar, keyboard shortcut or menu button, as you would with any other wordprocessor.

And then some. The button bar across the top lets you change the look of the text from font to colour to size to adding shading and frames. You can add pictures, animation or video clips. Move them, change the size and angle and then run. OLE (object linking and embedding) is also supported.

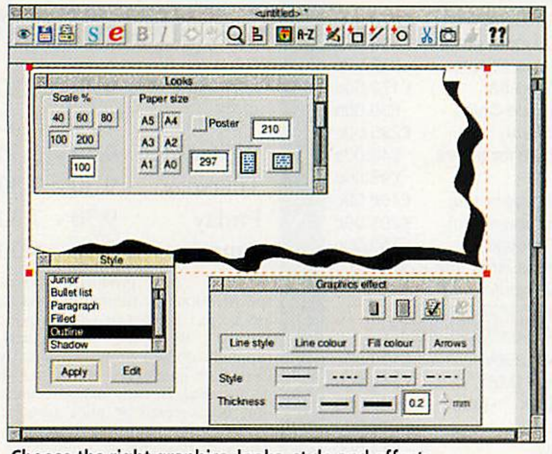
Hold down Ctrl, double-click and your table will be loaded into *TableMate*, changed and when saved will be updated in *TextEase* too. The same is true of *Paint*, *Draw*, *TableCalc* and *DiagramIt*. *Draw* files can be enhanced, pictures can be placed in a line of text, or you can add you own rectangles, lines, ellipses or freehand creations. The Looks window includes a poster option among others, which lets you create huge posters with an overlap for the glue.

You can also opt to see the coordinates on your mouse on screen, or how about printing out work where spelling mistakes are highlighted? Simply drop a sprite on the *paper colour* in the Looks window and that will become your background – especially useful when you convert the file to HTML, where the image will be used to tile the background.

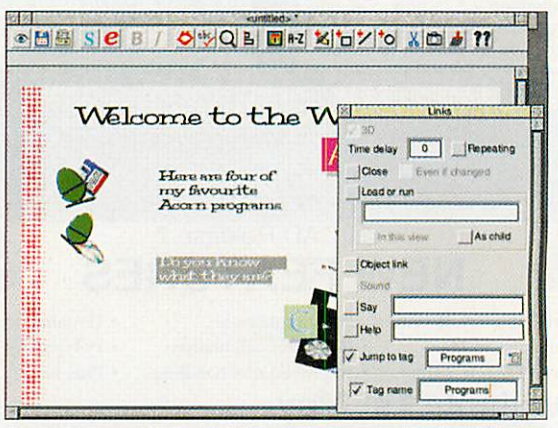
And there's more. You can align objects (text or graphics) in a variety of ways, create a word bank or set up your own styles, swap the case, count your words, add headers, footers and page numbers. Shading and grading of a headline is simplicity itself and blocks of text can be linked. Squashed files can be dropped straight in, as can RTF files, metafiles and bitmaps. I found myself adding shadows to the frame holding a movie, changing the time between frames on an animation and opting for continuous .WAV files.

Making the link

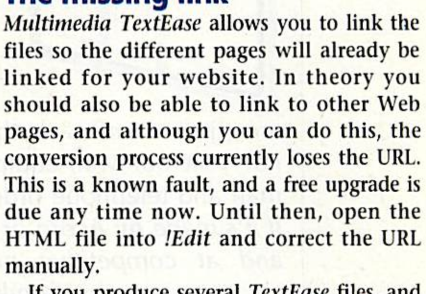
The linking is important, especially if you're going to be doing presentations or creating Web pages. However, this section is not well explained. The structure is straightforward: Select the phrase, word or picture and press Ctrl + Q. Next, drop the file you want to link to onto the Links window. Its position on



Choose the right graphics, looks, style and effects



Create hypertext links within your document whether for presentations or the Web



TextEase makes it much easier to add and edit graphics – just remember basic design rules

your hard disc will be noted and you can also choose a sound to be played from the link or for words to be spoken.

To create hypertext links you need to enter the *tags* name and position. The tutorial on this is sadly lacking – help and hints are available on the button bar but these aren't enough at times. It's reasonably easy to work out through trial and error, even though not all the options are explained but those that are feel rushed.

One trap which has been fallen into more than once by developers is not knowing when to stop. And this is especially true of *simple-to-use* programs. You want to make the program have the basics down pat, be intuitive and obvious but also have enough levels to allow your users to unpeel extra facilities when they feel ready. *Multimedia TextEase* avoids this trap and seems to have the balance about right, but it falls into another with its manual. This is the weakest element of the package and I'd like to see an equivalent of the in-depth tutorials and projects produced when *Impression* first came out.

Enter the Internet

The *HTML Reader/Writer* is the latest development. The Reader and Writer are two separate programs. The former allows HTML files to be read and displayed as *TextEase* files. Once installed, any HTML file dropped onto a *TextEase* page, or dropped onto the *TextEase* icon on the iconbar, is converted and can then be edited or printed as a standard *TextEase* document.

If the file contains links to other local files, these links can be activated from within *TextEase* to move to the other files. But this only works with files on a connected disc drive – if you want to access URLs you'll have to use a Browser and be connected to the Internet.

When it comes to the Writer, the HTML file produced can be viewed by any Browser, or uploaded to the Internet as your Web page. The HTML page will contain text and pictures and will look as close as possible to the original *TextEase* file. Install *Te2HTML* into a convenient directory on your hard disc. Load it onto the iconbar and drag your *TextEase* document onto the iconbar icon and a save window appears. An HTML version of your file is created and, if you've used pictures on your page (or files best saved as pictures such as a background), your hard disc will also hold a folder called *images* which will contain the picture files required by the HTML.

At the conversion stage you can choose how to save your pictures. The default is a combination of GIFs and JPEGs but you can also choose just GIFs, JPEGs or Sprites depending on what you're using and why. You can also choose to scale the page. Eighty per cent is best, as Web browsers tend to use more of the screen area for menu bars and so on than *TextEase* does. Check this all out on your browser, but remember that *TextEase HTML* uses tables, however not all Acorn browsers do.

In fact, tables are what makes this process work. It uses them to position objects more precisely, and so give you more control over what another person will see. It's best to follow the design rules of not using too many graphics and keeping the font simple. Writer defaults to the sizes expected by Microsoft Explorer, Netscape Navigator and ANT Fresco, to make things easier.

Don't go mad

The trouble is that *TextEase* is too easy and you can go crazy adding graphics at angles, animated GIFs and fonts galore. However, basic design rules do apply. If possible, avoid overlapping objects, otherwise a *photo* taken of the area would be saved as a picture file. This means that although your HTML and *TextEase* versions are close, the total HTML is larger (because it contains a picture), and so may take longer to download. In extreme conditions, the whole of the page will become a single picture file.

You can check for overlaps by pressing Ctrl A and selecting everything. Also watch out for large rectangular frames surrounding everything, or long horizontal or vertical lines which can cause the whole of your work to become a single picture. Use small blocks of text, rather than a single long block as there is little control over the type size used by the receiving browser, a very long block of text is likely to end with a large white space. These restrictions are being worked on and the next release promises to make use of tables within tables and allow you to mix tables and paragraphs.

The missing link

Multimedia TextEase allows you to link the files so the different pages will already be linked for your website. In theory you should also be able to link to other Web pages, and although you can do this, the conversion process currently loses the URL. This is a known fault, and a free upgrade is due any time now. Until then, open the HTML file into *!Edit* and correct the URL manually.

If you produce several *TextEase* files, and place them all in the same folder, you can drop the folder onto the *TextEase* Writer, and convert all the files in one go. If you do this you may run into trouble with the numbers of files allowed in a folder – the Acorn filing system has a limit of 77 files per folder. Since each converted file can produce one HTML file and one picture folder, if you save the HTML files in the same place as the *TextEase* files, you can only convert 25 files before the directory is full.

This should be adequate for most websites. If not, Softease suggest you save the HTML files to a different folder, or remove the problem completely if you save to a DOS partition. Alternatively save up for your Risc PC 2, or run *raFS* (on the this month's cover disc), which circumvents the problems of long file names and limited files per folder.



When converting, choose your picture output depending on the graphics you've used

And the verdict? It's great to use if you don't want to know anything about HTML and just want to get some great looking pages online as quickly as possible. AU

Where are we now?

All versions of *TextEase* are still available and there are also Windows versions of everything including the HTML Reader/Writer. And yes, you can pop your Acorn files onto a PC disc and use them within your Windows *TextEase* and take them back again.

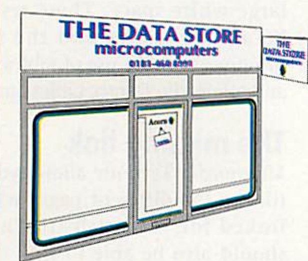
Product details

Price:	TextEase £49, Talking TextEase £65, Multimedia TextEase £85, HTML Reader/Writer £35, My World Reader £35 (all prices ex VAT)
Supplier:	Softease
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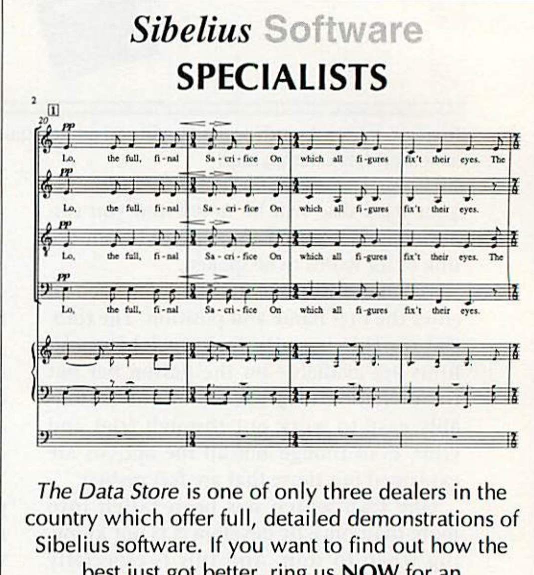
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Genesis	£10	Noot	£10	MacFS	£25
Genesis II	£10	Desktop Tracker	£10	MultiFS	£2
Magpie	£5	Score Draw	£10	Stitch	£5
Graphbox Pro	£25	Hearsay II	£30	Wordworks	£5
Presenter GTi	£10	Omniclient	£40	Topographer	£25

(Some software titles may not be compatible with newer models of Acorn computers)

See us at the Wakefield Acorn Spring Show - Thornes Park Athletics Stadium, May 16th-17th

OPENING HOURS

	AM	PM		AM	PM
Monday	9:30	5:30	Thursday	9:30	5:30
Tuesday	9:30	5:30	Friday	9:30	5:30
Wednesday	Closed	Closed	Saturday	9:30	5:30

6 CHATTERTON ROAD BROMLEY KENT BR2 9QN
Tel 0181-460 8991 • ***Fax*** 0181-313 0400
Web http://www.datstore.demon.co.uk/
Email info@datstore.demon.co.uk



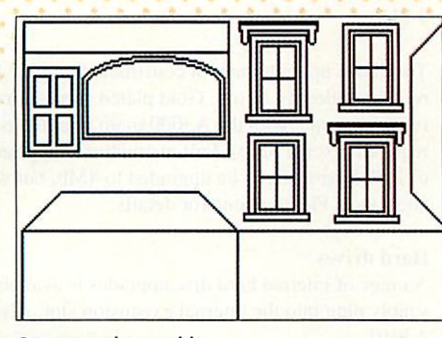


Victorians revisited

The problem many teachers face with the IT National Curriculum is how to devise a suitable 'vehicle' to convey a particular concept to the students. Data handling features very strongly in the Orders and is typical of the problem faced by teachers. How can you build a lesson around data handling?

Humanities subjects appear to be the favourite ones for data handling, with history being a clear winner. Previous issues of *Acorn User* have featured data handling software associated with History and, in particular, the Victorians. The latest offering comes from the North London based IT Learning Exchange who have put together a superb pack based on the 1891 census data. At £25 it is not a cheap resource, but has been very well thought out and presented.

The spiral bound A4 booklet includes a range of activities with helpsheets and 12 worksheets for pupils to use. Also included are 12 photographs of Victorian Islington which are referred to in the booklet. The disc is in PC format but can be read by all but the oldest Acorn computers. On the disc are two files. The first (Shopnet) it a bitmap graphic (.bmp) which can be converted to an Acorn sprite using one of the PD file conversion programs. The idea is to print it onto some card so that pupils can cut it out and assemble it. Depending on the age of the children, they could either colour it using a program like *Paint* and then print it in colour, or print it in black and white and colour it using crayons.



Cut out and assemble

The main part of the software is a datafile which can be loaded into one of several data handling programs available for Acorn computers. The file is supplied as text, but can be converted into the more common CSV format suitable for most data handling software. Guidance is given in the documentation on how to use the data to search and analyse.

The IT Learning exchange can be contacted on 0171-753 5092, fax 0171-753 5753, e-mail: unl.ac.uk or visit their website at http://www.unl.ac.uk/itle/

KS1 Literacy Evaluation Project announced by NCET

The National Council for Educational Technology (NCET) is to evaluate a new pilot project that will provide free low-cost portables to a number of primary schools.

Suppliers are invited to submit equipment for testing by NCET and outline the support structures and materials that they intend to provide to participating schools, with a view to supplying units free of charge. LEAs are also encouraged to express interest in this project and will be asked to nominate schools who fulfill set criteria.

Based on a suggestion from the industry, this project aims to provide Key Stage One pupils with access to word processing and evaluate its impact on literacy. A steering committee will be established to instigate a tender process for the appointment of an academic evaluation team and oversee the implementation of the project. NCET expects the project to commence in April 1998 and continue for two years.

For further information contact Jane Spilsbury at NCET on 01203-416994.

Tizzy's Toybox grabs a silver!

Building on their previous successes at the Educational Technology Awards, Sherston Software collected a silver award, in the primary category, for *Tizzy's Toybox*. The award was presented by David Blunkett, Secretary of State for Education and Employment, at BETT'98.

Produced by Sherston authors Sue Rankin and Hans Rijnen and developed in conjunction with Mike Matson, *Tizzy's Toybox*'s fun-filled activities have helped thousands of schools address important early basic skills. James Bayliss, Sherston's Marketing Director who is delighted with the award, says "*Tizzy's Toybox* has been our fastest selling title ever, with over 4000 units being sold in its first year. Everyone involved with the *Tizzy* project is really thrilled with this official recognition."

Tizzy was even mentioned in the Secretary of State's speech at the opening ceremony when David Blunkett said that he was "... looking forward to looking into the *Toybox*!"

Sherston Software
Tel: 01666 840433
Fax: 01666 840048



Anglia's website on CD

Schools that, for whatever reason, are not connected to the Internet are undoubtedly missing out. Or at least their students are.

Recognising the problem, Anglia have put the contents of their website onto two CD-ROMs: one for primary, one for secondary. Anyone who has visited Anglia's website at http://www.anglia.co.uk will know what is available. Come to think of it, even if you do have Internet access, at £35 each, these CD-ROMs are well worth having if for no other reason than to rest assured that students can only access education material.

Anglia
Tel: 01268 755811

Contacting me

You can contact the Education page by writing to me, Geoff Preston at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aueduc@idg.co.uk

A3000 upgrades

Memory

1-4Mb	£49 (57.57)
2-4Mb upgrade pack	£39 (45.82)
4-8Mb	£99 (116.32)

The above upgrades are all constructed on four-layer boards, as recommended by Acorn. Gold plated connectors are used for reliable contact with the A3000 main board. No soldering is required (except 8Mb). Full instructions supplied. Some older types of 2Mb board cannot be upgraded to 4Mb, but we offer a trade-in allowance. Please phone for details.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. Also suitable for the A3010.

80Mb	£99 (116.32)
120Mb	£103 (121.02)
170Mb	£109 (128.07)
210Mb	£115 (135.12)
340Mb	£125 (146.87)
540Mb	£139 (163.32)
RISC OS 3	£29 (34.07)
ARM3 (25MHz)	£49 (57.57)

(Dealer fitting recommended for the ARM3)

A3010 upgrades

Memory

1-4Mb	£59 (69.32)
1-2Mb	£19 (22.32)
2-4Mb	£49 (57.57)

The 4Mb upgrade is constructed on a compact four-layer board and uses just two RAM chips. No soldering is required. Full instructions supplied.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. For prices, refer to the A3000 section.

RISC PC

SIMMs...

(Please ring for latest prices)

4Mb	£9 (10.57)
8Mb	£16 (18.80)
16Mb	£25 (29.37)
32Mb	£45 (52.87)
64Mb	£99 (116.32)

16Mb SIMM to 32Mb upgrade £33 (38.77)

(By upgrading your 16Mb SIMM to 32Mb you don't lose a SIMM socket. The original 16Mb SIMM must be returned to IFEL and the type must be suitable - most are. Please phone to check first or ask for our free leaflet.)

RAM packs for upgradable SIMMs

16Mb-32Mb	£35 (41.12)

The pack consists of 8 chips which plug into empty sockets. Instructions supplied, no soldering needed.

VRAM modules...

1Mb	£39 (45.82)
2Mb	£65 (76.37)
1Mb-2Mb upgrade	£41 (48.17)

128Mb SIMMs - £179 (210.32)

2Mb VRAM £65 (76.37)
ARM3 £49 (57.57)
RISC OS 3.7 (RISC PC) £49 (57.57)
RISC PC 32Mb SIMM £45 (52.87)
Complete 60Mb hard drive system for 300 or 400 series - £75 (88.12)

A5000

Memory

2-4Mb	£59 (69.32)
4-8Mb	£99 (116.32)

Dealer fitting for the 8Mb upgrade is recommended for the 25MHz A5000.

A3020/A4000

Memory

2-4Mb	£45 (52.87)

Hard drives (A3020)

170Mb	£63 (74.02)
210Mb	£79 (92.82)
340Mb	£89 (104.57)

A400/1

Memory

Per Mb (up to 4Mb)	£25 (29.37)
4-8Mb	£99 (116.32)
RISC OS 3	£29 (34.07)
ARM3 (25MHz)	£49 (57.57)

Hard drives. For prices, refer to the A310 section.

Various

PowerTec SCSI 2	£155 (182.12)
PowerTec Ultra SCSI 3	£175 (205.62)
ARM3	£49 (57.57)
RISC OS 3	£29 (34.07)
MEMC1a	£25 (29.37)
MEMC1a (2nd User)	£20 (23.50)
Hard disc cradle	£6 (7.05)
Fan filters (pack of 5)	£3 (3.52)
RISC OS manuals, no vat	£22
Dongle dangle	£6 (7.05)
Chip extractor tool (for eg MEMC, ARM2)	£4 (4.70)
CDFS upgrade for Oak SCSI card	£25 (29.37)

The following item is reduced to clear;

A3000 scanlight (Computer Concepts)	£55 (64.62)

A310

Memory

4Mb	£49 (57.57)
8Mb	£99 (116.32)
RISC OS 3	£29 (34.07)
RISC OS carrier board	£12 (14.10)
ARM3 25MHz	£49 (57.57)
MEMC1a	£25 (29.37)

Hard drives

2Gb IDE	£105 (123.37)
IDE controller	£59 (69.32)

A complete 60Mb hard drive system is available for only £75 (88.12)

2nd User

Please phone to check availability.

A3000 1-2Mb	£9 (10.57)
A3000 RAM board (ie bare board, no chips)	£5 (5.87)
A5000 2-4Mb	£29 (34.07)
ARM3	£35 (41.12)

Spares/Repairs

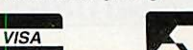
We carry stocks of most replacement chips for the Acorn range. (MEMC, VIDC, IOC and most memory devices). We can also fit any upgrades and offer a computer repair service.

How to order: The VAT inclusive amount is shown in brackets. Postage on small items £2, hard drives £3. Cheques made payable to IFEL. Most Credit cards accepted, and Switch. Official orders welcome.

All products (except some marked "2nd User" or specially reduced) are fully guaranteed for 12 months. All items normally carried in stock have a 14-day money-back guarantee. Please note that the cost of memory products varies - please phone for the latest pricing.

IFEL **Educational and quantity discount available. Dealer enquiries welcome.**

21, Glenfield Road, Glenholt, Plymouth PL6 7LL. Tel (01752) 777106. *Fax (01752) 777830*



Track it down

Pam Turnbull navigates two new programs

Map Detectives is another program from the excellent Simon Hosler which uses and extends geography skills via adventure rather than basing the format on maps. This time it's theft and, in the steps of Agatha Christie's detectives, you set off on a very British adventure. There are two mysteries to solve which are couched in a mix of cartoon and photography which works very well.

The Village Mystery sends you off to the big house, where first you must decide what has been stolen. Reading skills must be used as well as logic and reasoning, and in this part children are asked to relate a photograph to a drawn plan and decide which item from the photograph is missing. This can be quite a tricky skill for some children to learn and it's good to see it featured here. Once you've discovered what is missing from the house and garden you need to search the countryside for the pieces and for clues to the culprit.

Now you find yourself on a map screen where x and y co-ordinates must be entered to take you to the place where the missing object has been sighted. Once there you not only retrieve the item but you'll find a clue or be able to interview a witness; a fun way of teaching map symbols and map reading. The presentation is fun and bright. There is

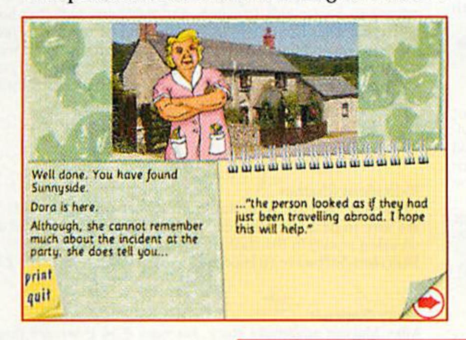


a key with the information on map symbols, a sweet – clicking it reads the clues out loud – and an array of criminals which make you sort your clues before accusing the villain. The sound effects when the police drag him (or her) off to jail are brilliant. The adventure is different each time you play too.

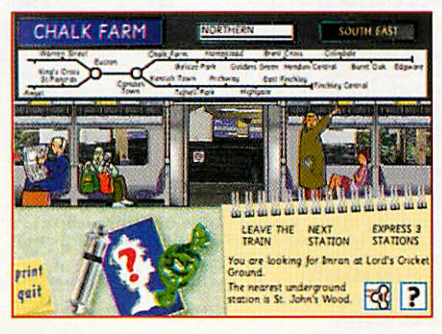
The box contains the usual manual, but also mug shots of the suspects, help sheets for the adventures and printed versions of the maps. Maps? Yes, the second adventure sends you around the country looking for witnesses, using a walker's map, a cyclists; map and a map of the underground. Daylight Robbery provides you with details on all the known villains and you must again match clues to culprit. The maps are more difficult to traverse but there is help.

Here the map screens vary. When on the cycle map you work your way along country lanes, click on signs to see them enlarged and use a photo and a small map to make your decision at cross-roads. You must decide between different road types and be able to transfer your map knowledge to the real road and vice versa. On the underground you must change lines and trains to get to your destination, again there are some great sound effects here.

I must confess to getting lost on the walking map, and this does need some thinking about. Here you are using three-figure co-ordinates and compass skills. It is good visualisation practice but can be confusing as it's not always obvious which way you have come, though you can scroll the photo around to get your bearings. Practice makes perfect. A practical way to learning mapping skills without getting lost or wet! So who did take that Chinese vase from Lady Hartley's?







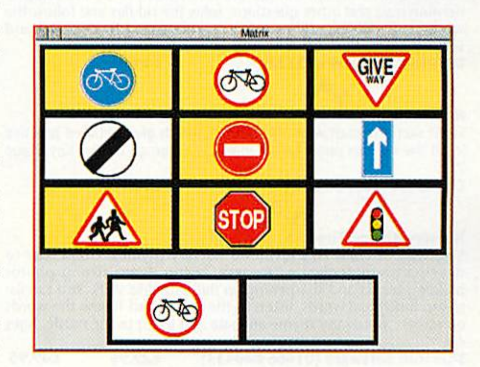
Mix 'n' match

Matrix is a content-free framework program which provides a grid, within which you can develop matching and sorting of numbers, shapes, and so on, as well as classifying objects, pictures, colours and patterns. This can be used with any child, but is particularly useful for those with learning difficulties and in particular dyslexia.

Matrix comes with 17 tasks covering colour and shape matching, letter and word recognition, geography, adding, counting, number recognition, road safety, sequencing and visual perception. Additional packs are also available for this age group and for older children, covering everything from history to modern languages.

These can be integrated into the Matrix library on your hard disc, for instance, for early colour matching you start with a choice of two colours and three positions, as the concept progresses children need to decide on the colour and the shape and put it in the right position in the grid.

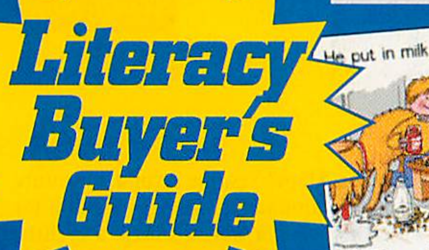
The *corrective* feature is optional and best turned off the first time a grid is used, the parent or teacher can then print out the results and see any problems. Turn on the feature for the next run through so children can see where they are going wrong. This is not the most exciting program in the world, though it is strangely addictive. It is very useful at home or school as it is simple



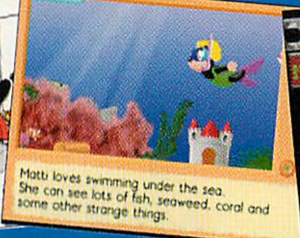
to set up and use and builds confidence quite effectively. Tasks are randomised so each activity is not same and there is a scanning option for children who use switches instead of a mouse.

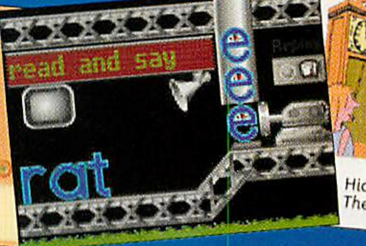
Product details

Product:	Map Detectives
Ages:	8-13
Price:	£44.95 (CD-ROM)
Supplier:	Sherston Software, Angel House Sherston, Malmesbury, Wilts SN16 0LH
Tel:	01666 840433
Fax:	01666 840048
E-mail:	sales@sherston.co.uk
Web:	www.sherston.com
Product:	Matrix – Early Learning Pack
Ages:	5-7
Price:	£45 for main program plus two additional packs of tasks, though these can be bought separately
Supplier:	Le Computer
Tel:	01376 348886













APART from accessing the Internet's, FTP sites, discussion groups, IRC and Web pages on your computer what teachers need is software designed with their needs, and a UK classroom, National Curriculum or Scottish 5-14 guidelines in mind, as well as ideas on how to expand on concepts away from the computer or even using other packages. At its best a computer is a tool used to enhance a topic, practice a skill, spark imaginations as well as teach useful IT skills from mouse use to cut and paste, from spreadsheets to database and Web page design.

The Acorn machines have always had a huge array of titles to choose from (often designed by teachers) whatever subject area or ability level. What is more these same developers understand that most schools cannot afford to upgrade machines every few years so even the most visually exciting programs will work on older RISC OS machines, not just the ones with the latest processor.

Literacy has a high profile in the general media at present with emphasis on government goals for 11-year olds and the implementation of Literacy Hours. So taking just this subject let's see what is available for classroom use. All these programs are developed in the UK so there is no problem with pronunciation, spelling or idiom, while spelling and early and pre-reader programs use a phonic and lower case approach as standard. Single user and site licence prices are given.

A Mouse in Holland
Martin Mouse lives in a windmill near Amsterdam. You can explore his kitchen and bathroom, follow him as he cycles to Amsterdam and explore the city. Over 3,000 words of text but unusual visual occurrences for pre-readers too. Ages 6-11
4Mation (01271 325353) £27.50 £55

Alphapics
Picture and letter matching. Contains two programs which let children match letters and initial letter sounds to pictures. In I-SPOT they match letters to pictures and in I-SPY they match pictures to letters. Ages 3-7
Topologika (01326 377771) £25 £50

An Eye for Spelling
Uses the look, cover, write, check visual approach for poor spellers. Each word teaches a specific letter patterns and you can add word groups or edit existing lists. Ages 5-11
ESM (01223 365445) £29.50 £29.50

Arc-Spell 1 & 2
Vol one: includes WordMaze for short vowel words; Magic-E for that final e; Fortress where r modifies the sound and Matcher with a rhyming option. Vol two: Vowel Digraphs such as ea; Splitter for two syllable words, Suffixing and Creator using good grammar in written English. KS 2/3.
Xavier (01248 351151) £36.50 each £36.50

English Mixtures
Covers proverbs, odd one out, parents and young, collective nouns, masculine and feminine, alphabetic order, abbreviations, tenses and apostrophes. Ages 8-13.
ERIC (01903 872400) £14.50 £29

Explore with Flossy the Frog
Provides reading opportunities, simple problem solving and stimulus. Children can explore at leisure and things will happen when items are clicked. A separate Art Disc contains a set of compressed drawfiles of characters and objects for work in other packages. Ages 4-8.
4Mation (01271 325353) £27.50 £55

First Words with Smudge
Encourages easy word skills in four sections. *Writing Letters* has you drawing around letter shapes, *Complete the Picture* covers matching shapes, first letters or words, while *Fill the Gap* deals with letter beginnings, endings and blends. Finally a mini word processor lets children practice their typing.
Storm (01935 817699) £25.99 £52

First Words and Pictures
Match from a set of early vocabulary words to clear bright pictures in one of three simple games. Ages 3-7
Chalksoft (01775 769518) £27.90

Flashcard
Early learning program specially designed for first word recognition and matching. Children are asked to match carefully chosen early vocab words from a selection of topics.
Le Computer (01245 362225) £23.50

Happy Matrix – Reading
Teaches both reading and writing skills on the computer and/or on the board game. Starts with shapes and moves on to letters and word blends. Ages 3-7.
Creative Curriculum Software (01422 340524) £35.20

Guardians of the Greenwood
This eco fantasy mixes Photo CD photographs and illustration as Crinkle must fight off the advances of Hawk Enterprises with the help of the forest creatures. Rich vocabulary use of over 20,000 words all of which are spoken by the characters as well as appear on screen.
4Mation (01271 325353) £39.50 £79

★NEW★ I Can Spell/I Can Write
Great graphics with these two programs making problem spelling and writing fun. Easily edited wordlists and activities which children can complete in short time periods make them especially useful in the classroom. There are lots of topics provided but with the flexibility for teachers to add ones of their own.
RESOURCE (01509 672222) £30 each £75 each

★NEW★ Look and Read Series
For children in the 7-11 range who have some reading ability but lack fluency: Earthwarp – follow the adventures of Ollie the environmentally aware alien; Geordie Racer – play detective to unfold hidden treasure; SkyHunter – help Jackie, Butch and Trevor catch some crooks planning to sell a peregrine falcon; Through the Dragon's Eye – save the magical world of Pelamar. Spywatch – take on the role of WW2 spy undertaking exciting word and logic activities. The latest edition is Captain Crimson extending grammar, spelling, punctuation and vocabulary skills.
Longman (01223 425558) £27 each £60 (5-users)

Magic E
Dyslexia aid but also for general use. Covers the main function of the final silent e in English. Uses digital speech and compatible with Touch Window and Concept Keyboard.
Xavier (01248 351151) £36.50 £36.50

★NEW★ Matti Mole's Summer Holiday
Interactive story for 8-9s. Set in France there is fun and exploration as well as 16 English skills to learn from composite words to tenses. There are 3 levels of difficulty and 10 screens to explore and 4 games to play as you help Matti get enough money for a ticket to the sun.
Sherston Software (01666 840433) £40 £65

Much Ado at Rainbow's Edge
Explore the village at Rainbow's Edge and meet over 100 characters with individual stories – all read aloud. Find out what really happened when Georgie Porgie kissed the girls and where the terrible trolls ends up. Go into the schoolroom to try the comprehension quiz and other questions: solve the riddles and follow the word trails. All the stories are cross-referenced to personal and social themes. Ages 5-7
RESOURCE (01509 672222) £49.95

New Puncman
Eight sections each with 10 activities which give detailed practice in all the various punctuation marks in common usage. Key Stage 2/3.
Chalksoft (01775 769518) £35.75

Nursery Rhyme Time
Selection of children's favourite nursery rhymes. Good way to develop phonological awareness, laying down strong phonic building blocks and sharpening up dull listening skills. You can listen to individual words, listen to the rhyme and follow the words on screen, watch the rhyme animate and listen to the music. Ages 4-6
Sherston Software (01666 840433) £29.95 £49.95

PB Bear's Birthday Party
Adapted from the book of the same name. Pseudo-interactive journey through the big day with PB, Lucy the Lamb, Russel the Rabbit and Dermott the Dog. The story is read aloud and the text highlighted. Key words are represented by pictures which animate and then click to discover the missing word. Different voices will read to you. Dress PB, guess what's in the presents, help bake a cake and find who is in the shrubbery. Ages 3-5.
IMS (01934 522880) £31.50

Picture Book 2
Suite of six colourful programs using sound and graphics to introduce 3 to 5-year olds to words and numbers: Alphabet Book an electronic ABC, Count'em an introduction to numbers. Flashcard for word recognition, Spell It covering learning to spell, Snap is a matching game for up to three players, and WordMatch matching words to sound and pictures. Teachers can create their own alphabet files. Supports concept keyboards.
RGSC (01582 761395) £35 £70

Ridiculous Rhymes
12 poems read by Tony Robinson. Great gruesome tales which are sure to be a hit with kids. Comes with useful ideas and a book on using poetry in the classroom. KS2
Sherston Software (01666 840433) £29.95 £49.95

Rusty Dreamer
Mike Matson adventure story. For ages 8-14 there are three different reading levels, an exciting plot as Rusty struggles to overcome the strange object which invades her world, video animations, 130 photos, picture galleries to stimulate creative work and extensive source materials.
Sherston Software (01666 840433) £40 £65

Sentence Pumper II
Features sampled and synthesised speech. Children can access any word or sentence and the teacher can add own words and sounds to help children copy the words.
Xavier (01248 351151) £36.50 £36.50

★NEW★ Sherlock
A program to get children purposefully reading – and thinking. Texts are provided but you can use any text you want, so it can be tailored exactly to a child's needs. Used to: Develop predictive reading skills, where they have to find the missing letters or groups of letters, improve children's punctuation skills by challenging them to replace the punctuation marks which you've told Sherlock to leave out. Children make intelligent guesses about the meaning of a text as it gradually reappears, letter by letter or phrase by phrase. Buying a character or word if they need help. Letters or words can be read and a picture can be linked to provide clues. Scoring and timing are optional. KS 1 to 3.
Topologika (01326 377771) £30 £60

Sign Graphics Set
Three packs of sign graphics for use with deaf and hearing impaired children learning literacy skills alongside British Sign Language. This My World 2 pack lets you create posters, storybooks and worksheets. There is a dictionary of everyday words with pictures, words and sign graphics as well as a Fingerspell Font which allows *writing* in any word processor using a full alphabet of finger spelling symbols.
SEMERC (0161-627 4469) £59 £59



Smart Alex
Alex can pull lots of faces and laugh, cry and blow raspberries. Children control Alex and how s/he feels by clicking on symbols and words. Lets children investigate feelings, new words and build these into stories. Ages 3-11
SEMERC (0161-627 4469) £36 £72

Smudge Punctuates
Three levels to suit ages (5-9) and abilities. Cecily the cat provides the *rules* reference guide as you move from Level One covering spaces, capitals, full stops, questions and exclamation marks, through Level Two and brackets, hyphens, commas and inverted commas, to Level Three and apostrophes, semi colons, paragraphs and dashes. All done while correcting a short illustrated story page.
Storm (01935 817699) £34.99 £70

Soapbox
Emphasises the spelling pattern and vowel sound in words. Ages 5+
Xavier (01248 351151) £36.50 £36.50

Sounds & Rhymes
Teaches and practices the identification of short-vowel and consonant sounds within words and awareness of sounds that rhyme. Ages 5-7
Xavier (01248 351151) £36.50 £36.50

Speakeasy
Use real speech to practise phonics. See the letters move on the screen to build up a word. Simple consonant – vowel – consonant examples are included and you can set up your own activities as well. Add your own sounds using Resound or Oak Recorder. Ages 3-7
SEMERC (0161-627 4469) £25 £25

Speaking Starspell
Features over 300 word lists with speech and a picture for every word. Uses a friendly approach to correct misspellings and draws attention to how words are built with the aim to help writing skills. You can enter and edit your own word lists too.
SEMERC (0161-627 4469) £42 £84

Speedy Keys
Four fun games to test typing and spelling. Rescue Annie from the ferocious lion, zap the mice, save the balloon and help the beetles play a tune. Designed to help children's keyboard familiarity and can be used as part of a structured typing course. There are recording facilities and the program adjusts to the level of the child. You can add your own text to the program too.
SEMERC (0161-627 4469) £36 £72

Spell-IT
Spelling practice program with real speech. The simple and clear design follows the principle of Look, Listen, Cover and Copy.
SEMERC (0161-627 4469) £25 £25

Spell with Sarah and Sam
Based firmly on the rules of spelling there are interactive pages to work through that are contained in 7 different modules. Each module has a section giving practice on a particular rule, ordering, anagrams and missing words. A certificate is awarded at the end of each module. Ages 7-11
Cambridgeshire Software House (01487 741223) £17.50 £35

Ted's Adventures
A picture story book encouraging vocalisation and decision making. Two stores feature Ted the teddy bear: Ted Goes Shopping and Ted Goes Visiting. Ages 3-6
SEMERC (0161-627 4469) £25 £25

Spellbank
Aimed at KS2/3 this aims to provide spelling help, checking spelling, providing close matches, and in some cases clues to the meaning. The correct word can then be pasted into the WP or DTP package. The main dictionary has 16,000 words with the ability to create topic or personalised dictionaries. A record is kept allowing teachers to design differentiated spelling revision.
SEMERC (0161-627 4469) £25 £50

Spelling Book
Provides a computerised book which can be used to help with written work. You can enter words directly form the Spelling Book into any word processor or DTP package by clicking the word you want. KS1-4
Creative Curriculum Software (01422 340524) £34

★NEW★ Superspell
A comprehensive spelling package for all ages (7+). Comes with and easy to administer diagnostic tests and photocopiable pages to produce student work booklets so each one can work on their own personalised spelling program. There are non-threatening fun activities such as World Find, WordSplash and Word Speech. Four activities access 3,200 pre-programmed words in 160 lists of which 138 wordlists highlight particular spelling patterns or rules, five word lists of the most commonly misspelt words and 17 lists of the most frequently used words. You can add your own word lists as needed. Performance and progress is reported on too.
4Mation (01271 325353) £29.95 (floppy) £39.50 (CD-ROM) £59.90 (floppy site licence) £79 (network licence)

Talking Rhymes
Each of the rhymes contain a range of word, picture and sequencing activities. Rhymes are: Humpty Dumpty, Little Miss Muffet, Little Jack Horner, Georgie Porgie. Rhymes are jumbled like a jigsaw – with words or phrases – clicking on a word speaks it and complete the rhyme to hear it read aloud and see an animated sequence. Age 4-7
Topologika (01326 377771) £30 £60

The Spoken Word
Encourages an understanding of the spoken word and stimulates an interest in reader. Child produces bright pictures and words which you can vary. The computer speaks the colour and the object. Welsh version available. Ages 3-5.
Wyddfa (01286 870101) £21.99

★NEW★ Tots TV ABC
Designed to teach the sounds and shaped of the letter of the alphabet. Uses digitised human speech, animated and morphing graphics in 3 games dealing with visual and aural letter discriminated and letter recognition using the characters of Tilly, Tiny and Tom from the TV series. Ages 2-6
Sherston Software (01666 840433) £19.95

Tray
Following on from the now 15-year old Developing Tray, text gradually appears on screen and develops reading, comprehension, intuitive prediction and spelling. Now on the more powerful Acorn machines children are presented with a passage of text from which a selection of letters have been removed. Examine the remaining text for clue they can predict letters and words.
SEMERC (0161-627 4469) £20 £20

Vocabulary Builder
Volume one splits into two parts. Part 1 has 81 three letter words in 9 groups, the computer hints at a word and the user guesses. The second part has 81 keywords and 10 words are produced using the keyword. The words are chosen and the child must guess from the clue which word is being described. KS 1/3. The second volume covers back to front words and a version of hangman. KS 2/3.
ERIC (01903 872400) £14.50 £29

WordLibrary
Another program which provides a wordlist in a separate window which you can have open alongside your favourite word processor. Words are displayed in 1-5 columns and coloured if required. It can be set to scan through the words when used with a switch box. This is bundled with a copy of Pictogram that progressively teaches children the use of graphs for representing data.
Kudlian Soft (01926 851147) £29 £29

Words & Pictures
Ages 4-7. Extends and reinforces the BBC Schools TV broadcasts with activities on letters, sounds and word blends. There are 3 packs available: Pack 1 includes story games including ordering pictures and matching animals to environments; word/letter games including activities on letter sounds (a d g c o s r n m f). Pack 2's story games include matching people to jobs, telling the time, word/letter games using the sounds b p h k e l t i u y. Pack 3 practices higher level language skills with a frog's life cycle, seasons, stories and others and games using letter sounds and blends (j v w cr ch fr gr pr).
Longman (01223 425558) £24 each £53 (5-users)

Writing with Symbols
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Widgit (01926 885303) £75 £150

READING SCHEMES

Cambridge Reading Scheme Talking Stories
Six stories complement the reading scheme. Using a large and cursive font, and easy to understand and use icons, each word is spoken individually or you can opt to hear each sentence/page again. Similar in format to the Rosie & Jim Talking Story books and the OUP Reading Tree.
Sherston Software (01666 840433) £40 £70

Flying Boot – Max & the Machines
First of Flying Boot reading series devised by Ted Wragg to be put on CD-Rom. Supports early reading skills and introduces IT skills. The Storyline introduces children to the features of the package, The Activities accessed via a treasure chest are: Matching, sorting and sequencing. Audio help and extension activities – Gobbler's Game and Magpie's Puzzle. Finishes by showing children how to make a book using the activities encountered earlier. Suggested related activities given at the end of each section. Ages 4-5
YITM (01264 342992) £39.99 £39.99

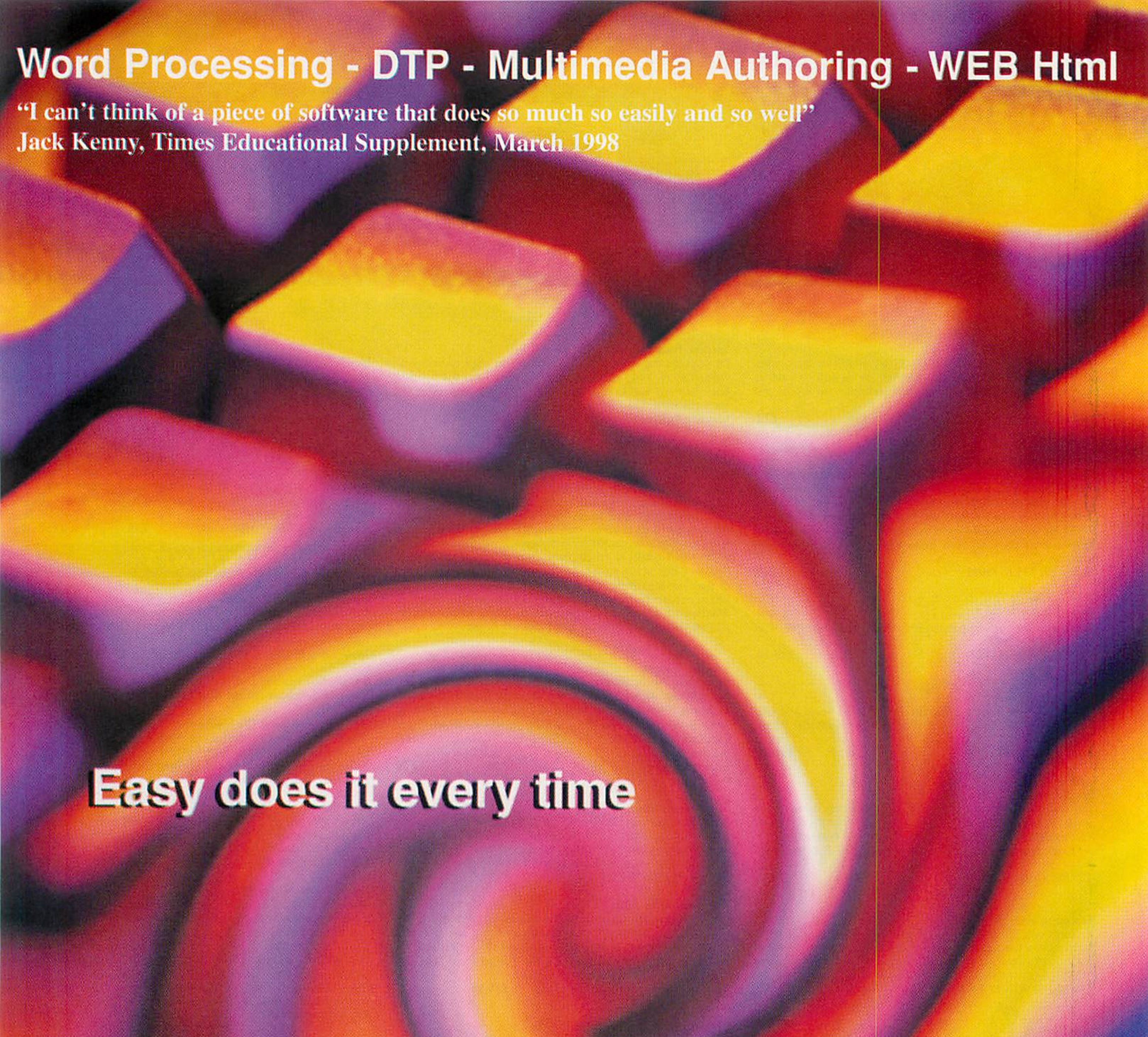
Flying Boot – Maximania
Second CD-ROM in the series designed to support the development of ready skills using Nelson Flying Book Reading scheme. It can be used on its own or with other reading schemes too. Contains 6 chapters developing a storyline based on the transport with Max and friends exploring different environments. New concepts and skills are practised during activities, and as are other skills such as matching, sorting and sequencing. Also comprehension. Performance is recorded. Ages 3-7
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★NEW★ Fuzzbuzz Level 1
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SEMERC (0161-627 4469) £59 £59

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Sherston Software (01666 840433) £40 per stage £70

★NEW★ Wellington Square
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SEMERC (0161-627 4469) £59 per level £59 per level

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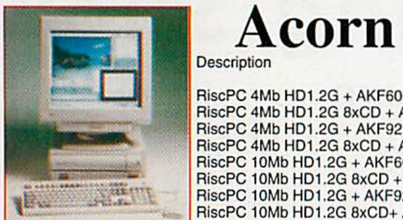
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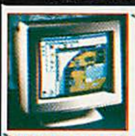
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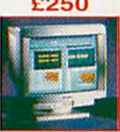
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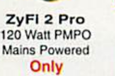
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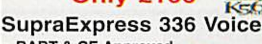
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BC20 BJ4x00 Head&Black	£32
BC21 BJ4000 Head + Inks	£35
BC22 BJC4200 Photo Cart	£27
BC22K BJC4200 Photo Kit	£37
BC29F BJC4200 Fluores.	£32
BCI10 BJ30 Black 3 Pack	£11
BCI11BK BJ70 Black 3 Pk	£9
BCI11C BJ70 Colour 3 Pk	£15
BCI21BK BJC4000 Black	£5
BCI21C BJC4000 Colour	£14
BJI20B BJC6x0 Black	£5
BJI20C BJC6x0 Cyan	£6
BJI20M BJC6x0 Magenta	£6
BJI20Y BJC6x0 Yellow	£6
BJI642 BJ300/330 Black	£11

Refills/Re-Inks

Re-Ink Ribbon Spray	£10
Black Ink Cart Refill 50ml	£8
3 Colour Ink Refill 75ml	£13

Citizen

ABC/Swift Mono Ribbon	£5
ABC/Swift Colour Ribbon	£13
Projet IIc Colour Cart.	£30
Projet IIc Mono Twin Pack	£7
Project IIc Mono + Head	£22
Printiva Black	£6
Printiva Cyan	£6
Printiva Magenta	£6
Printiva Yellow	£6
Printiva Silver	£16

Epson

Styl. Col. 400/600 Black	£19
Styl. Col. 400/600/800 Col	£22
Styl. Col 800/1520 Black	£21

Hewlett Packard

Deskjet 340 Hi-Cap Black	£21
Deskjet 5x0 Series Black	£24
Deskjet 5x0/340C Colour	£26
Deskjet 6x0 Series Black	£24
Deskjet 6x0 Series Colour	£26
Deskjet 8x0 Series Black	£24
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500 Sheets (Fanfold/Single)	£5
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100 Sheets Epson 720dpi	£13
200 Sheet Canon Hi-Res	£25
500 Sheet HP Bright White	£11

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Bulk DSDD			
10x	£2.40	100x	£21.00
30x	£6.90	200x	£40.00
50x	£11.00	500x	£90.00
Branded DSDD			
10x	£3.00	100x	£26.00
30x	£8.70	200x	£48.00
50x	£13.50	500x	£110.00
Bulk DSHD			
10x	£2.40	100x	£21.00
30x	£6.90	200x	£40.00
50x	£11.00	500x	£90.00
Branded DSHD			
10x	£3.20	100x	£27.00
30x	£9.30	200x	£50.00
50x	£14.00	500x	£115.00

500 Disk Labels	£7
1000 Disk Labels	£10

All prices are inclusive of VAT @ 17.5%



Dave Acton and **Dave Lawrence** present another wild selection

star info

Year-piece

Author: Bob Fox

	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T		
J	1998			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				J	S
F							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				F	O
M							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	M	N
A			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						A	D
M					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			M	J
J	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30								J	F
J			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					J	M
A						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		A	A
S		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							S	M
O				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				O	J
N							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		N	J
D		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						D	A

Not a program but a drawfile from **Bob Fox.** Bob has come up with the idea of a universal year planner and has created all the components using *Draw*.

Simply follow the instructions in the file *univ* copying the dates, blocks for the start and ends of months and so on in the usual way with Ctrl-C. (Ensure that the gridlock is on.)

There is a choice of calendar-year-end and academic year (starting in September) and the resulting A4 planner can easily be printed out. A 1998 planner (OK, we're a tad late with this one) is included as an example.

One good turn deserves a module

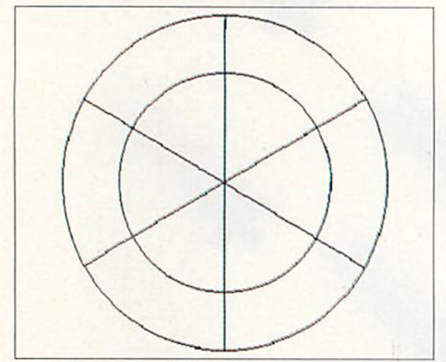
Author: Dennis Ranke

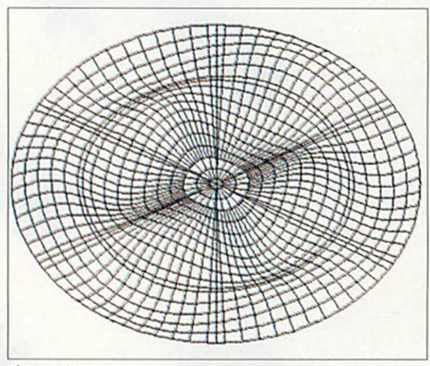
The module here is provided by **Dennis Ranke.** You may remember some time ago a Basic program that turned the pointer to face the direction in which it was travelling. Dennis has done the hard work of writing a module to do the same job – simply double-click on *Turning* to install.

The source is included for those who are interested. 64 different versions of the pointer are created – they are simply plotted on the screen and the screen memory is copied to the table. The module works by intercepting the vsync event and monitoring changes in the pointer position. When it has moved, the direction is adjusted to follow the movement and the appropriate image is selected for the pointer using OSWord 21. To disable the effect (and it is quite difficult to use the desktop while enabled!) simply *RMKill turning.

Take some beating

Author: Bas Lago


Figure I


Figure II

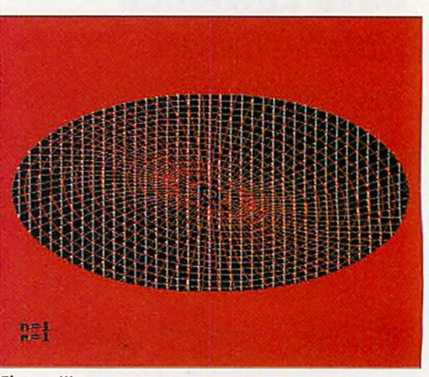


Figure III

The beating in this case is taken by a simulated drum. If you've ever wondered what actually happens to the surface of a drum when some long-haired monster attacks it with sticks, **Bas Lago** provides the answer as a slow-mo animation.

Drum stores its animation as a large number of sprites in several directories, so you'll need to run the program somewhere where there's at least 4Mb of space. If you have sufficient memory, the animation will obviously be faster when played back from a RAM disc, although your hard drive will do fine. Make sure you set the current directory to that containing *Drum* – the program will begin by creating directories to hold the frames of the animation.

Run the program and press either G to generate a new animation (you'll need to do this the first time), or A to run the existing one.

When generating a new sequence, choose a suitable angle of observation (45 for example) and amplitude (try 80). On a 25MHz ARM3 machine (with *RMfastered Basic) the generation time is about 12 minutes so Bas suggests you make a brew while you wait! On his 200MHz StrongARM it takes about 34 seconds. When complete the animation will begin, showing the vibration in 'fundamental mode'.

The drum can be made to vibrate in a variety of modes. Each mode corresponds to a pair of values – m and n. n can range from 0 to 8 and is selected by pressing the appropriate number key. m can vary from 1 to 4 and is selected by pressing f1 to f4.

'It is difficult to see any pattern in the sequence of modes when placed in ascending order of frequency. The sequence for the modes produced by this program is: (0,1) (1,1) (2,1) (0,2) (3,1) (1,2) (4,1) (2,2) (0,3) (5,1) (3,2) (6,1) (1,3) (4,2) (7,1) (2,3) (0,4) (8,1) (5,2) (3,3) (1,4) (6,2) (4,3) (2,4) (7,2) (5,3) (8,2) (3,4) (6,3) (4,4) (7,3) (5,4) (8,3) (6,4) (7,4) (8,4).

'It can be shown that no two modes have the same frequency although the frequencies of widely different modes are often so close that it is impossible to detect the difference in pitch. There are many other modal frequencies interspersed between these, but not between the first 16 in the sequence.'

The 'fundamental frequency' can also be set at different octave intervals using keys A to E. The program starts with frequency 'C' (middle C for the (0,1) mode). 'A' requires a very low limit of frequency response to give an audible sound. Similarly, 'E' requires a very high limit. In these cases, the internal speaker is not very effective and better results will be obtained through your hi-fi.

You can disable the sound with Q and re-enable it with S. N can be used to cycle through the ascending sequence of frequencies. Press N and then any key to move onto the next frequency.

Drum theory

'For a circular drumskin of radius a, the displacement z of a point (r,theta) is given by:

$$z = A\ J_n(k_{nm}\ r)\ \cos(n*theta)\ \cos(wt)$$

when the membrane is vibrating in the (n,m) resonant mode, where:
A is the amplitude constant
$J_n(x)$ is the Bessel function of the first kind of order n
$k_{nm} = j_{nm}/a$ where j_{nm} is the mth root of $J_n(x) = 0$
$w = 2pf_{nm}$ where f_{nm} is the frequency of vibration

'The frequency f_{nm} is related to the parameter k_{nm} by $f_{nm} = k_{nm}*sqr(T/d)/2p$ where T is the membrane tension per unit width and d is the membrane mass per unit area. The lowest resonant frequency is f_{01} (n=0, m=1). Hence $f_{nm} = k_{nm}*f_{nm}/k_{01}$. (*Do you think Ringo knows all this?* – DA)

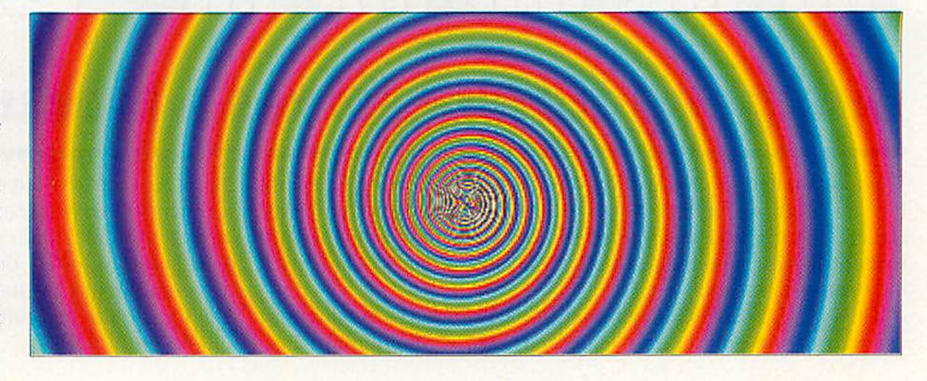
'In general, the membrane vibration pattern is characterised by nodal circles and diametral lines along which there is no movement of the membrane. In the (n,m) mode there will be m nodal circles (including r = a) and n nodal diameters. This is illustrated in Figure I for the case of n = 3 and m = 2. When vibrating in this mode, the instantaneous surface pattern is as shown in Figure II in which a polar grid is drawn on the membrane and it is viewed at an angle of 50 degrees to the horizontal.'

Whirlagog

Author: Alex Smith

Alex Smith was so impressed by Jean van Mourik's *Whirl2* demo in last October's column, that he has re-jigged it to run at a higher resolution and in 256 colours. This obviously needs a Risc PC to run because of the definable palette. Alex says that he has left Jean's original plotting code intact, but just re-worked the colour selection for 256 colours.

Of course, it wouldn't really be *info without a bit of colour cycling, so once the whirl is finished, press the left or right mouse buttons to spin the pattern.



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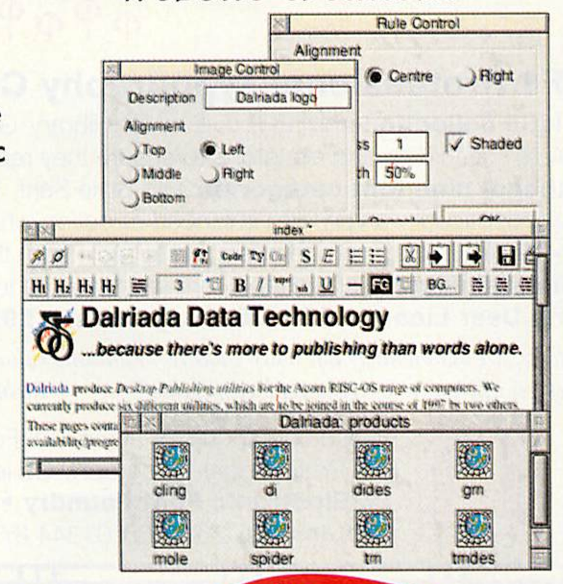
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I'll name that tune in 256

Author: Justin Fletcher

Well, 252 in fact. Bytes that is. The latest sub-256 byte masterpiece is a DJF player from **Justin Fletcher**. And in case you've never heard of DJF, it stands for David's Jingle Format and is a popular way of including little jingles in your e-mails (for example, in your signature).

djf takes a single parameter which should be an un-embedded djf0 tune (not a version 1 tune). If no parameter is given, Justin's own signature tune is played.

Numerous examples are given in the form of obey files – just double-click to play. Now, and this is the best bit, Justin has abbreviated the names of his examples so the game is to identify the (popular) melodies from their one voice, wavesynth-beep rendition – not at all easy! You will note that *HIGNFY* has to do some extra jiggery-pokery. This is because command line length is limited to 256 characters by the OS.

DJF explained

DJF tunes are formed by a string similar to: {djf0-ndndnd-ndndnd-ndndnd}. Here djf0 is the id – the 0 is the version number of the specification to which the tune adheres. After the ID comes the data for the channels – each channel is separated by '-'. Every note consists of a pitch (n) and a duration (d).

The pitch of the note is expressed by alphabetic and numeric characters from the keyboard. If you imagine a real keyboard overlayed on the computer keyboard and align middle C with Q, then the keys on the keyboard correspond:

```
 2 3  5 6 7  9 0    <-black notes
q w e r t y u i o p  <-white notes
C D E F G A B C D E
```

The lower half of the range is in the same style:

```
 a s  f g  j k l    <-black notes
z x c v b n m , .    <-white notes
A B C D E F G A B
```

Rests can be included by '_'. Note that all the pitch codes are in lower case. This is part of the specification and should be conformed to, even though some editors may accept either.

The notes used in DJF are multiples of semiquavers. This means that notes shorter than this cannot be played and must be either ignored or worked into the music. By setting a high tempo it would be possible to double all the notes lengths so that semiquaver became 2, and demisemiquaver was 1, but this is not recommended as the tempo is not really for this purpose and in any case does not really stretch to doubling the speed.

The lengths of the notes are indicated by a single-digit hex number. Hence, 1 is a semiquaver, 2 a quaver, 4 a crotchet, 8 a minim and 0 (i.e. &10) a semibreve.

'Note that tunes do not need to be padded to the end of the song, and after the last note on a channel has played, the channel will be silent. In the body of the tune, any unrecognised character is ignored, so the tunes may be padded with spaces or any other unrecognised character.

Tunes can legally be any length, but since the idea behind DJF is for small tunes these long tunes should not be posted as common things in e-mail. Some players will not accept overly long tunes.'

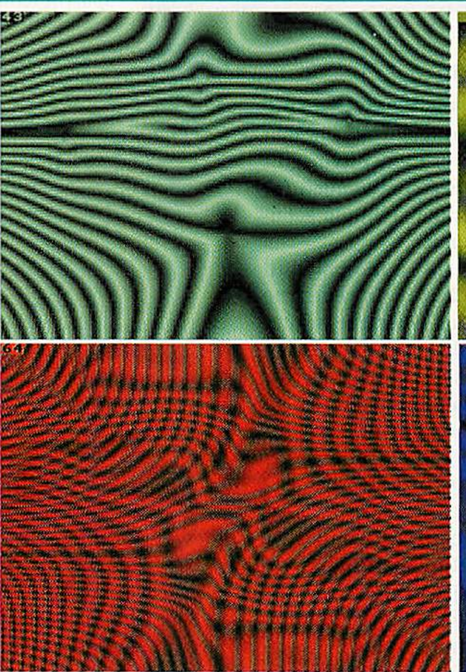
Water on the brain

Author: Nigel Stoner

...is clearly what **Nigel Stoner** was suffering from when he came up with his latest graphical demos.

The story begins with *Satin* – 'not just another Plasma gen' says Nigel, 'but a satin cloth generator.'

The original PC lava program was converted into Basic. Ripples are drawn by averaging distances of four attractors which you can place wherever you like. You also enter a bandwidth and this represents how wide the ripples







are. With low bandwidths (<25) the ripples start to show interference. With high bandwidths (>85) you start to get a true plasma effect.

Water followed on from *Satin* with two satin patterns cross-faded. The effect of ripples and counter-ripples on the surface of a pond is quite enchanting. Well, quite wet at least. *Satin2* is a cross between *Satin* and *Water*, making a symmetrical water pattern in about a minute on an A5000.

Prime suspect

Author: Mr Reyesnbach

One of the staples of *info is fast maths whether it be Mandelbrot, trigonometry or PI. This month we revisit our old friend the Mersenne Prime, courtesy of **Mr Reyesnbach** of Amsterdam.

He has hand-coded some efficient squaring routines to produce the two routines *MTest* and *Msearch*. The first tests for prime-ness and second searches between given ranges for prime numbers.

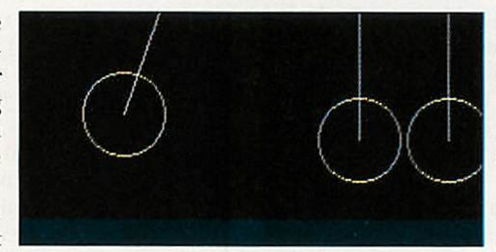
According to Mr R, these routines are 300 per cent faster than some previous ones. Of course, without these to compare, you'll just have to take his word on it. If this wasn't enough, he's also borrowed our good friend Mr Vlietinck's long multiply routine from *Trackman2* to produce a StrongARM version *MsearchSA*. This makes use of the UMUL instruction in a rewritten squaring routine and Mr R is claiming a further 300 per cent speed increase.

Star info

From the cradle to the screen

Author: Scott Boham

Our old friend **Scott Boham** is the force behind this simple version of the classic Newton's Cradle toy. This executive time-waster demonstrates the old action-reaction thing pretty well. Authentic clicks courtesy of a small sound module add realism to the demo.



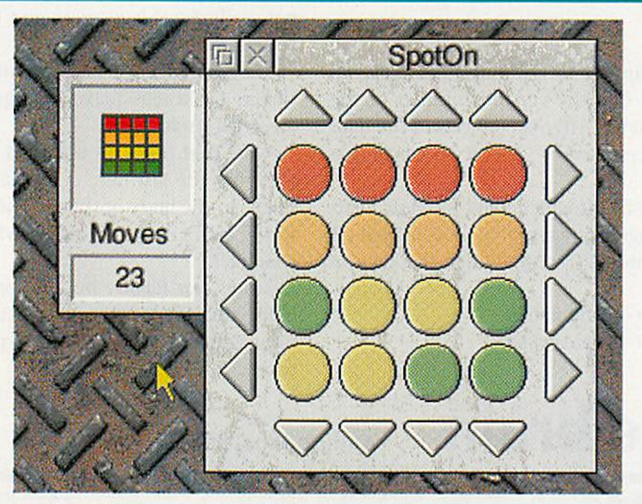
You can fool your friends by telling them that this program is mouse-controlled. Just watch them break into a sweat trying to stop those balls coming to rest. As it stands, the program isn't interactive – you can alter the starting angles of the balls, but only by editing the initial values of the array at the start of the program.

If anyone would like to come up with a user-controlled version (3-D too perhaps?) we would of course love to see it.

Slide rule

Author: Philip Mellor

In last December's *info, Scott Boham gave us yet another desktop puzzle, or, to give it its correct name, puzz*el*. Four months on, and we have a new version of the same puzzle, this time from **Philip Mellor**.



The aim of *SpotOn* is to arrange the coloured spots into rows and/or columns of similar colours. To start, click select on the icon bar or choose 'New Game' from the menu. Here you can select a number of possible game options including – the size of the playing area, the layout or appearance of the finished puzzle, the number of colours in use (using many colours will require the use of the larger board sizes), and the skill level. The higher the skill level, the harder the game is to complete.

The game is played by scrolling rows or columns in the puzzle. You win when you have successfully matched the pattern shown to the left of the playing area and, to make you feel inferior, the number of moves you have taken is also displayed.

The game menu also allows you to save your current position. To reload a saved game, double click it or drag the file to the *SpotOn* icon on the icon bar.

Jet propulsion

Author: Chris Bell

Chris Bell's *RemoteLJ* is an application which allows you to control many of the default settings on a Hewlett-Packard 600dpi laserjet printer. One of its most useful features is easy access to the 'Economode' draft printing mode, which can double the life of your toner cartridge.

RemoteLJ installs itself on the icon bar next to the printer driver and the full Remote Control Panel is accessed via a Select click on its icon. An Adjust click on the icon will toggle Economode on or off, the current state being indicated on the icon itself. (It also toggles the print density, as described below.) Clicking Menu on the icon will display the main configuration menu.

The Remote Control Panel is straightforward to use – just alter any of the settings and click on the 'Set printer' icon. (Note, some applications will override the settings you make in *RemoteLJ*.)

Three items can be set from the icon bar menu. Your choices will be saved when you select 'Save default' from the main Remote Control Panel...

1) Normal density

2) Economode density – the values selected here will be used when Economode is toggled off and on with an Adjust click on the icon bar icon. A setting of 3 is normal, although a lower value can often be used with new toner cartridges and a higher value can help when print quality begins to deteriorate. One is recommended for Economode, to give the maximum economy when printing drafts.

3) Error detection – this option should normally be selected as it prevents the computer from freezing when the printer isn't able to receive data for some reason (e.g. no paper). In such cases an error message will be displayed instead.

However, you may usefully deselect this option if you are using a CC Turbo Driver or some other means of buffering the printer output.

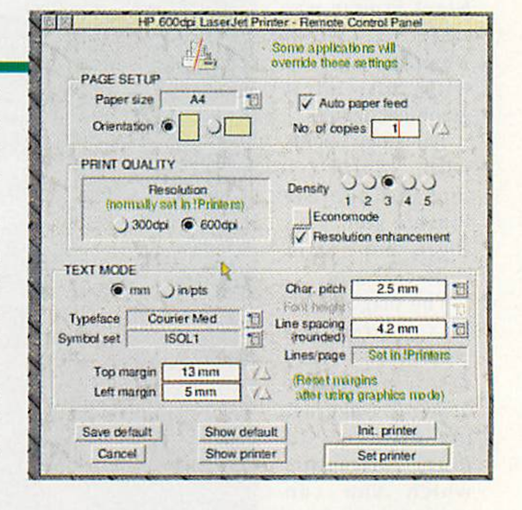
Automatic printer configuration

RemoteLJ can be setup to automatically configure your laserjet printer every time you switch on your computer, as follows:

1) Setup up the Remote Control Panel in your chosen manner and save the configuration by clicking on the 'Save default' icon.

2) Either install the complete *RemoteLJ* application directory inside *!Boot.Choices.Boot.Tasks*, or add a suitable command to run !RemoteLJ from inside *!Boot.Choices.Boot.Tasks.!Boot*.

3) Unless you are using a CC Turbo Driver, you must ensure that Acorn's Printer Driver is properly set up in extra good time. Do this by moving the Run !Printers command



(or similar) from *!Boot.Choices.Boot.Tasks.!Boot* to the end of *!Boot.Choices.Boot.Desktop* just before the command to turn off the hourglass.

Printer drivers

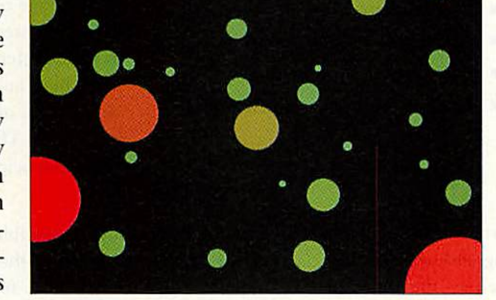
To allow the full use of *RemoteLJ*'s features, use one of the printer drivers on the cover disc instead of Acorn's or Computer Concepts': *x-LasJet-5* replaces Acorn's *LasJet-5*, *x-LJ-IV* replaces CC's *LJ-IV*.

Alternately you can modify your particular printer driver. Instructions are given in the *ReadMe* file inside the Printers directory. (Note – you should normally select the 'No highlights' text option.)

Phobos

Late entry #23 in our seemingly perpetual circle competition: **Fobe.** This is one that we knocked together ourselves and thought it might be of interest. It runs in Mode 27 as standard, but is quite happy to be down-resolution'ed to Mode 12 if you wish.

Up to 40 circles can appear on screen. They are positioned randomly and slowly grow, changing from green to red as they do. They are quite fragile though, and as soon as they touch another circle they burst and rapidly shrink back down to nothing. When they have completely disappeared, a new circle is randomly placed. The first part of the program simply sets up the screen, palette and a few arrays. The main loop consists of two loops. The first changes the radius of each circle and then checks if it has disappeared, moving it to a random, un-coloured, point on the screen if it has. If not, its proximity to all the other circles is calculated and if two overlap, the circle is shrunk at twice the speed it grew.



After this loop, a bit of screen bank swapping is performed, followed by the second loop which colours and plots all the circles.

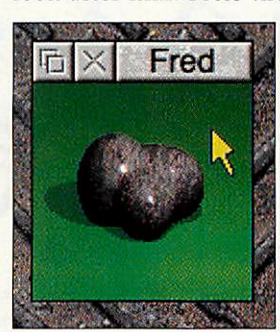
Tama-gotcha

Author: Owain Cole

It is purely fluke that **Owain Cole's** *VirtuPet* happens to appear in the April issue. Honest.

Hand reared from birth by Owain Cole.
Needs a new home.
Little maintenance required.
Loves children.
Gets on well with other pets.....

'Fred' is a desktop pet, and it's your job to look after him. Press the middle mouse button over him to pop up a list of services that can be rendered. As you'll find out though, you needn't worry overly if you neglect him for a weekend. Or even a week.



Spy Vs. Spiro

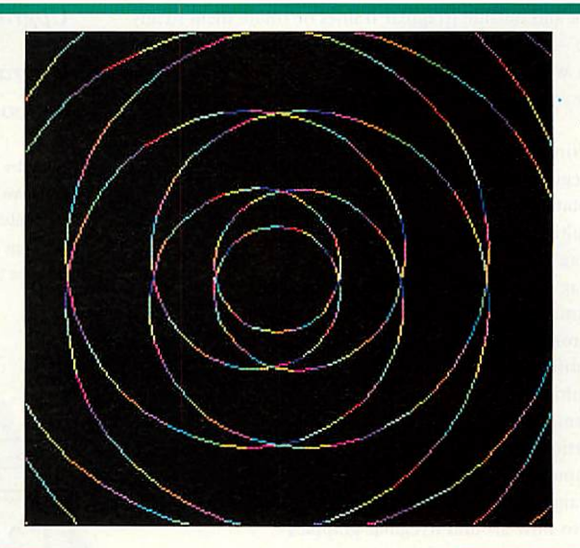
Author: Graham Stratton

No *info seems to be complete without at least one spirograph generator. *Spiro* is such an entity and was entered into a competition at school by **Graham Stratton.** From the tone of his letter, we think he won.

Spiro requires you to specify five values. These are:

1) The size of the hole at the centre of the spirograph
2) The number of cycles of the line
3) How sharp the line curves
4) The number of times the colours repeat in each cycle
5) The type of pattern

This probably sounds like just so many parameters – the best way to understand the values is just to play around with them. Try 10, 101, 64, 3, and try pattern types one to four. After this try other values for all the settings. If you press return, the same value will be entered as you entered the time before.



In a conventional (paper) spirograph you can only generate one 'type' of pattern (of the four possible in the program) – the circle within the outer circle must move the same way as they are rotating. This is not so in this program, and allows interesting effects when a pattern loops in on itself.

Note: Spiro likes mode 27, but can be persuaded to run in mode 12. Changing the mode instruction from mode 27 to mode 12 to run in low resolution.

*QUIT

All submissions – serious and silly, little and large, morecambe and wise to:

***INFO, *Acorn User*,
IDG Media, Media House, Adlington Park,
Macclesfield SK10 4NP
or e-mail us (including your real address please) at:
austarinfo@idg.co.uk**

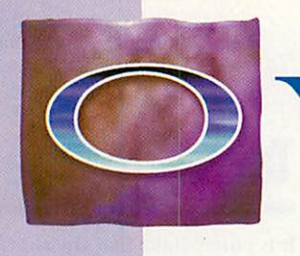
No submission should exceed 100K. Extras like screenshots and diagrams are always welcome – do send them on a disc rather than e-mail them if the total size is more than 100K though.

You needn't include a letter but please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned. As always, only *info submissions please.

Compatibility table

Program	ROS 2	ROS 3.1	ROS 3.5+
!Spiro	Yes	Yes	Yes
Satin	No	Yes	Yes
Satin 2	No	Yes	Yes
Water	No	Yes	Yes
Alx Whirl	No	Yes	Yes
MSearch	No	Yes	Yes
MSearch SA*	No	Yes	Yes
MTest	No	Yes	Yes
Turning	Yes	Yes	Yes
!SpotOn	No	Yes	Yes
DRUM**	Yes	Yes	Yes
1998 & Uni	Yes	Yes	Yes
djf	No	Yes	Yes
!VirtuPet	No	Yes	Yes
Fobe	Yes	Yes	Yes
Cradle	Yes	Yes	Yes
RemoteLJ	No	Yes	Yes

* StrongARM version
** Uses System Sprite Area



VATION

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Ovation Pro Colour Supplement costs £57.58

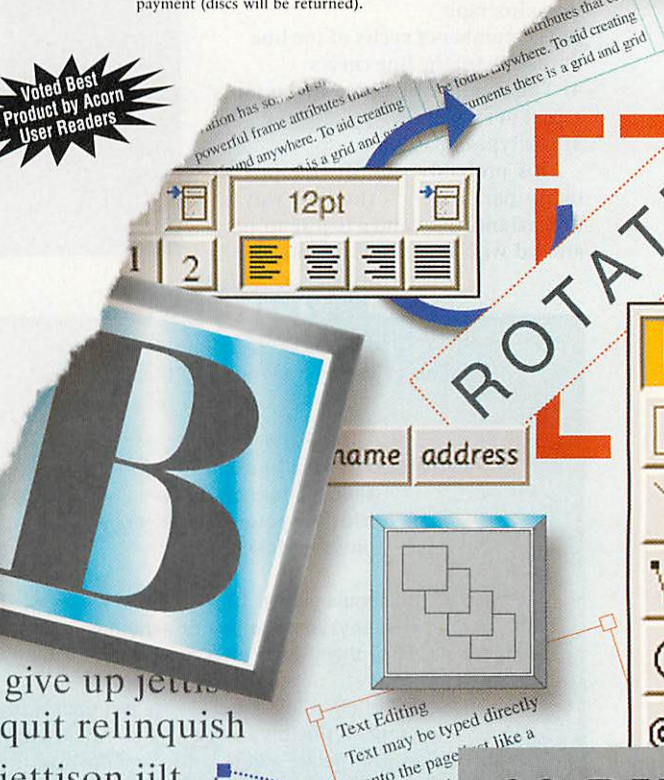
Note that all registered users who have bought Ovation Pro before May 1st 1997 will be sent the colour supplement free-of-charge.

For more information on Ovation Pro, including up-to-date news, specifications, latest applets etc., why not visit our web site at: http://www.beebug.com

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32 BIT ACORN SOFTWARE

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- A3000 RISC OS 3.1 computer with serial upgrade, 4Mb RAM, 720Mb internal IDE hard disc, new AKF50 monitor.£250. Tel: 01623 469617 (Mansfield) or e-mail: johnsew@argonet.co.uk
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The measurement of temperature is important in a lot of applications and it is one of the first quantities you look at in many investigations. Traditionally, temperature measurement has been done using thermocouples which give a small output and a non linear response.

Recent semiconductor developments have included sensors that give a fixed amount of current for each degree rise in temperature. Even these are difficult to use in a computer environment as you have to convert the current to a voltage, amplify that voltage and then pass it through an A/D (analogue to digital converter). This tends to destroy simple temperature/reading relationships and you end up, at best, with something that produces readings with some strange increments.

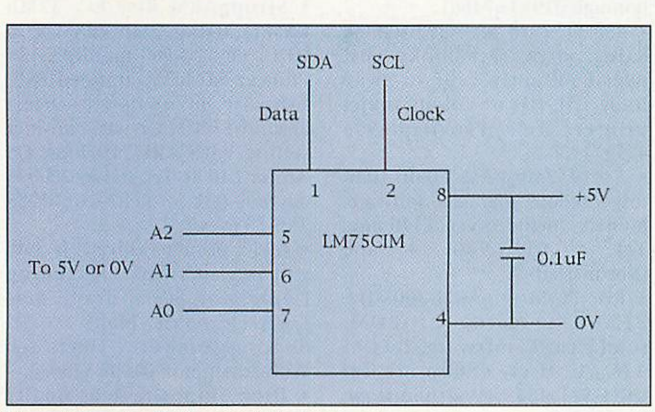


Figure I: The circuit diagram of the temperature sensor

Then I came across a new device that seems to have all those problems licked, it's the LM75CIM and it has an I²C interface allowing up to eight temperature monitoring chips to be used at once. It will measure temperatures between -50°C and 125°C with a reading accuracy of 0.5°C.

Within it is a silicon band gap temperature sensor, a nine bit A/D as well as temperature trip output and full I²C interface, all for less that a fiver. So I got the data sheet and found the snag. Well it's not so much of a snag as a little local difficulty – it's only available in a surface mount package. This sort of packaging is great for manufacturers and automated production systems but is a bit fiddly for home users to cope with. The tiny chip measures only 4 x 5 mm, so it's best to handle it with tweezers. Mind you, being so small it is quite quick to respond to temperature change and it can be mounted almost anywhere.

This chip can be used like a thermostat or thermal watchdog, triggering an event when the temperature rises above a set level. It can do this independently of any computer it is attached to, but my main interest is simply to monitor temperature. Therefore, the circuit is simplicity itself requiring only the chip and a supply decoupling capacitor, shown in Figure I. You will see that there are three address lines, these are connected to the supply (+5V) for a one, or ground for a zero. As there are eight combinations of this, we can use up to eight different sensors on one bus.

The simplest way of using a surface mounting package is to use a printed circuit board, so I designed one (which can be seen in Figure II and also in the file on the cover disc). If you are using this file to make your own board, make sure that it comes out at the right scale on your printer, that's why I have put a 30mm reference line on it.

The plug for the I²C bus is the same as I used on all my other I²C projects, so you should just be able to plug it in. The capacitor simply solders across the two outer pins of this plug. The large bulb-like piece of copper is not strictly necessary but can be useful because the best thermal path between the outside and the sensor in the chip is through the ground pin; therefore, this can be used as a large area sensor. If you want it to measure liquids you can simply dip this in, but be sure to cover all the wiring and the chip with a few layers of varnish or dribbled epoxy resin first. The chip can also be clamped onto the object you are trying to measure.

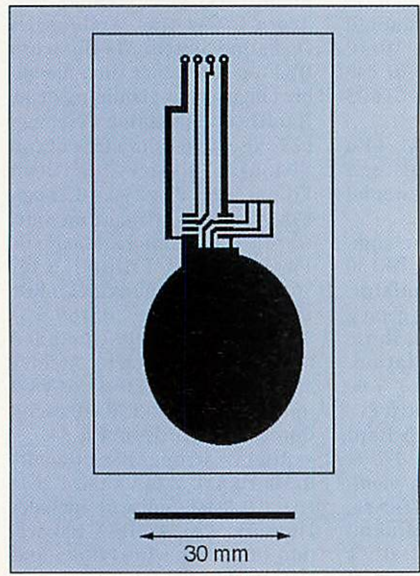


Figure II: The printed circuit board

As it stands, the printed circuit board will short-out the power supply – that's because each address input has a connection between 5V and ground. Before you use it you must cut one of these connections for each address line and so set the sensor's address number. Then, so you don't forget, write the number on the printed circuit board. Note that pin 3, the trip output, is not connected to anything.

If you can't make printed circuit boards, there is an alternative method of construction. Take a bit of PCB material and cut out a cross shape with a knife. You can do this by first scoring the copper with the knife and then removing it by picking and rolling it off. It's bonded on tight, but once you get a corner up it should pull off in one piece.

The idea is that you have something to solder onto each corner of the chip leaving the middle two connections on each side free. Then you can solder a single strand of wire between pin 2 and a separate section



like it *hot*

of PCB board you have isolated by cutting another strip just to the left of the square for pin 1. Then wire pins 4, 5 & 6 to zero or +5V depending on the address you want. It's a bit fiddly and you need a very fine tipped soldering iron, but the basic steps are shown in Figure III.

Onto the software. As always I like to produce a simple basic procedure first to see the hardware working and then go on to develop a desktop version. The LM75CIM has several registers for setting the trip points both up and down and also setting how many times their needs to be a reading above the critical temperature before the trip occurs.

This requires five internal registers including a pointer or select register to see what register you are going to access. Fortunately, the chip powers up in a known state, which is just the state we need to simply read the temperature, therefore the software is simplicity itself.

First you need to generate the device address from the temperature sensor number, this was determined by the setting of the three address lines. The address is determined by merging the sensor number with the fixed or hardwired part of the address for this chip. Then all you need to do to read the temperature is to read just two bytes from the chip's address, the actual data is contained in the nine most significant bits of these two bytes.

Alternative to using a printed circuit board

Score the copper

Pick out the strips

Data

Clock

+5V

Capacitor

LM75

LM75

Ground

Address 1

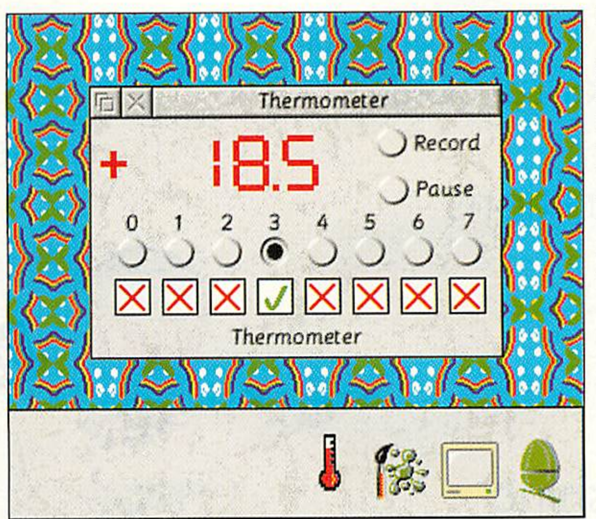
Solder the chip on

Wire up the other pins

Figure III: Construction of the temperature sensor PCB by hand

Each bit represents 0.5°C in a nine bit, two's complement form. In order to convert this into a normal BASIC variable we have to test to see if the top bit is set. If so, we need to set all the other more significant bits in the variable. Finally, as the number is in half degree steps this variable needs to be divided by two in order to convert it to degrees Centigrade. All that in less than 20 lines of BASIC and I wasn't even trying!

In order to make it into a desktop instrument we need to add a lot more code, fortunately for you this is on the disc as well. In order to simplify the display, the reading from only one sensor is displayed at any one time, the displayed sensor is chosen by using radio buttons. Underneath each of these buttons is a check box which tells the computer which sensors to read. This is automatically set up during the program's loading sequence to all the sensors that are attached to the bus, but you can disable or re-enable them at any time. If you try to enable a sensor that is not present you will get a warning box.



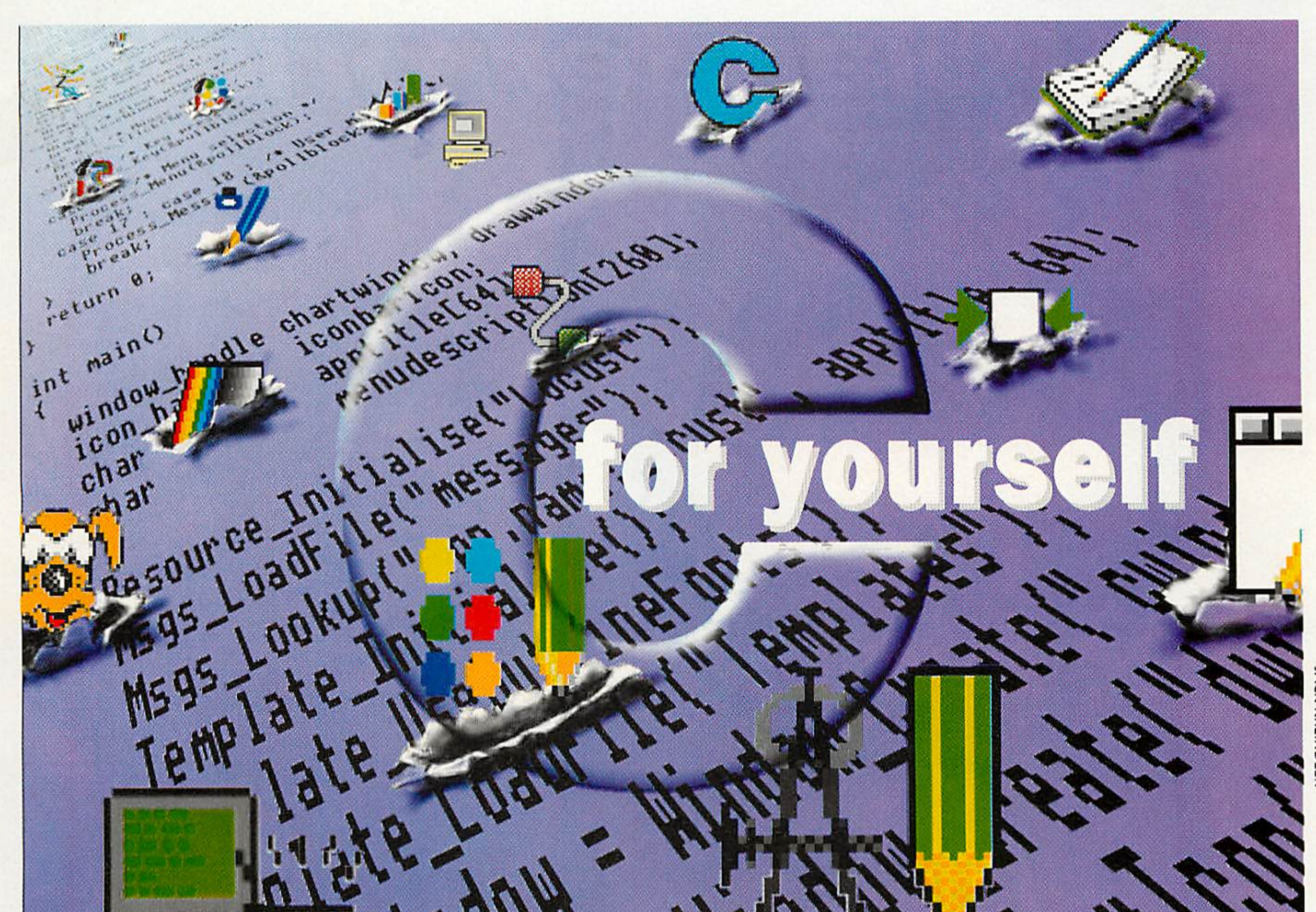
The thermometer program can handle eight sensors

However, the power of the software lies not in the reading and display but in the record function. If you are taking temperature readings you're likely want to record them and put them into a table, spreadsheet or use them to draw a graph. Therefore, the software will record all the enabled sensors to disc in the form of a text file that can be read by many applications.

The first number recorded is the time of the reading in seconds, followed by a TAB, this is followed by TAB separated temperature readings. After the last reading there is a return character (ASCII &OA) to tell the spreadsheet to go onto the next line. The reading rate can be set from the menu, to a maximum of one every 0.1 seconds. Before recording begins you must specify a path name by the usual drag and drop of an icon, then you can click on the record button to log the readings. You can open up the readings with any text editor to check they are all right.

If you have trouble tracking down this temperature sensor chip I can supply them. Look inside the help file for details. I'm off to see exactly how hot it gets inside my computer. AU





JACK KREINDLER

Steve Mumford plans the creation of a label design package

Over the last part of this series, we've covered several different aspects of WIMP functionality, including file transfer protocols, painting fonts and sprites to the screen, and printing. With all these skills at our disposal, it's time we put them to use in a full-scale application. One task which would include all the above would be a program to set out and print labels, allowing the user to create both text-based and graphical designs before positioning them on the page and printing them out.

This exposes one area that I'd like to cover during the construction of this application. Although it's possible to produce graphics of a sort by making use of sprites, this method would not be able to provide us with a particularly high standard of output, so at this stage it would be worth spending a little of our time investigating the DrawFile module. This would allow us to include line art in the label designs, giving us an easy method of creating borders as well as allowing us to import bits of clip art into our designs.

Broadly speaking, the program should satisfy some major goals, the first of which being that it should allow users to create labels of any size and allow them to be positioned anywhere on the page. Self-adhesive label sheets compatible with either inkjet or laser printers are becoming more and more widespread; due to the large range of shapes and sizes, our application should try to make it easy for the user to set up a format for one or more particular types. Generally speaking, we'd need several parameters to describe such a format – the number of labels across and down the page, the dimensions of each cell, the margins at the top and left hand sides of the paper, and the horizontal and vertical padding between the cells. Given these values, our program should be capable of constructing a layout and automatically positioning the labels into each of the cells when printing.

Instead of displaying and editing a whole sheet of labels at one time, I envisage the user working on something resembling a stack, with a window on screen showing the current label along with icons to flick backwards and forwards through the other designs in memory.

This minimises the work we have to do to create the redrawing routines, as well as keeping things simple for the user. Although this method of editing does impose certain limitations in design, it might be possible to work around these by providing the ability to export a whole page of labels as a *Draw* file, so that it might be edited in another application.

At this stage, it's probably a good time to think about the interface we provide and how we allow the labels to be created and edited. If we're looking to include *Draw*-based clip art within our labels, a drag-and-drop interface would seem sensible. However, how do we cope with the creation of text? The ideal solution would be to allow the user to edit strings of outline fonts on the screen in real time, using a WYSIWYG approach, but simpler, less satisfactory, methods could include using writable icons to hold the text before creating a movable, scaleable *Draw* object. In this case, if a change had to be made, the user would have to return to the writable icon and alter the text, at which point the program could destroy the old object and create a new one.

Thinking back to import and export, a useful feature of the application might be to allow a text-based list of addresses (perhaps in CSV – comma-separated value – format) to be loaded and automatically formatted according to some simple rules – there's been many a time in the past when I've wanted to throw together a mailing list and the import facilities of the word processors I've been using have left a lot to be desired.

A more advanced feature we could try to include would be the concept of a template label, created before the label data is imported, that defines the positions and characteristics of each of the fields in the address list along with any 'standard' features such as borders or background shading.

We've got quite a few ideas to implement, but writing the above program should allow us to bring all our previous knowledge together and apply it in a way that's hopefully useful beyond the realms of this tutorial. I'll make a start next month. AU

GAME SHOW

The shadow of *Doom* falls upon the Acorn – Steve Mumford reviews its release

Before we continue, I'd appreciate it if you'd take a moment to cast your eyes over the screenshots gracing this page. They're taken from the Acorn port of *Doom*, released by R-Comp Interactive and written by the inimitable Eddie Edwards. I've played the game on a number of platforms in my time, and the first thing that grabbed my attention on this Acorn version was the crispness and detail extending to the very limits of the scene.

Although the images in the immediate foreground still display strains of pixelitis, the objects further away from the camera can be rendered to make full use of the 800 by 600 mode that the game's running in. It almost brings tears to the eyes.



Assuming the legal whisperings that have been taking place between R-Comp and GT lead to a straightforward conclusion, *Doom* should have hit the shelves by the time you read this. Available as a standalone player or bundled with the widely available PC-format *Doom* compilation pack (containing the three CD titles *Ultimate Doom, Doom II and Master Levels for Doom II*), it promises to handle almost any WAD files you care to throw at it. R-Comp claim that *AcornDoom* is the best *Doom* conversion available on any platform, and from the evidence of the screenshots alone, it looks like they're in with a chance.

As I've already hinted, the graphics are particularly impressive, and whether you prefer a fast and furious 40 frame-per-second update rate at 320 by 256 pixels, or a more relaxed game in sumptuous 24-bit colour, your tastes are catered for. If you've got the VRAM, resolutions of 1280 by 1024 pixels are possible, although I'm fairly certain this exists for novelty value rather than playability. Unless, that is, the Risc PC II has something to say on the matter.

Music support is a little hazy in that the PC music was MIDI-based, and the sheer volume present creates some severe conversion problems. Happily, *AcornDoom* is reported to run alongside software synthesizers such as *ReMIDI*.



Network support appears to be modular in nature, so we might have to wait a bit for multiplayer games over TCP/IP; however, the advantage is that additions and updates can be downloaded and installed easily. Finally, R-Comp don't plan to rest on their laurels after bringing this beast of a game to the Acorn; in fact, *Doom* is their first step and we can expect to hear a lot more from them in the near future. Hopefully R-Comp will be able to nurture their relationships with GT and make use of them to bring bigger and better games to our barren shores. Keep watching these pages for the full details.

Weighing in at around 3,000 levels, I'd say that at £35 including VAT and delivery, *AcornDoom* represents very good value for money. Although the game doesn't display the latest in cutting-edge technology or gameplay, it's stood the test of time remarkably well and, let's be honest, is still great fun.

Contacting R-Comp couldn't be simpler – drop them a line at their dedicated *Doom* e-mail address, *doom@rcomp.co.uk*, write to them at R-Comp Interactive, 22 Robert Moffat, High Legh, Knutsford, Cheshire, WA16 6PS or telephone them on 01925-755043. More on *Doom* next month.

And finally

Some exciting news that's just popped up above the horizon – Andy Southgate, author of *Asylum* and *Oddball*, is working on something that might be described as a pan-dimensional games engine, intended to cover platforms from the PowerMac and PCs to Unix and Acorn.

He's relying on the increased power of the latest generation of machines (hopefully including the Risc PC II) to allow him to minimise the size of the hardware-dependent layer of code and write the rest of the engine in a highly portable form which rests on top. Watch out for more coverage in later issues – this is a project that holds a great deal of promise.

Jack Parkinson has made a brief mention of porting the *Descent* engine to the Acorn – I'd be most interested to see how a StrongARM would handle this sort of game and I hope it proves to be possible.

Add to this the various *Quake* players springing up, continuing development of games such as *Karma* and *Iron Dignity*, and the promise of support from Acorn, and I think I can safely say we're in for a good year.

GAME SHOW

Three revivals

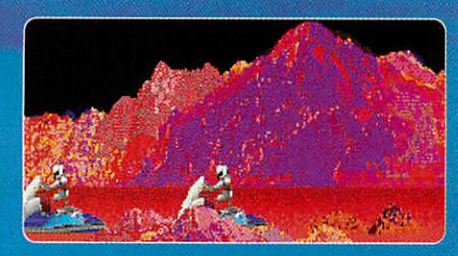
Graham Nelson on some repeat performances

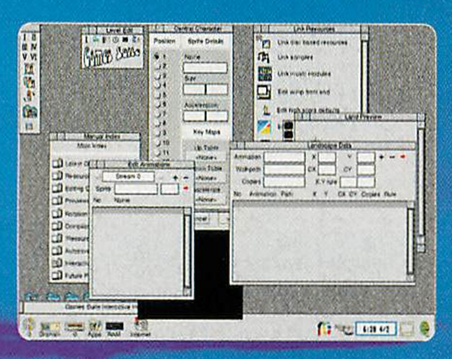
ProAction's Cyborg

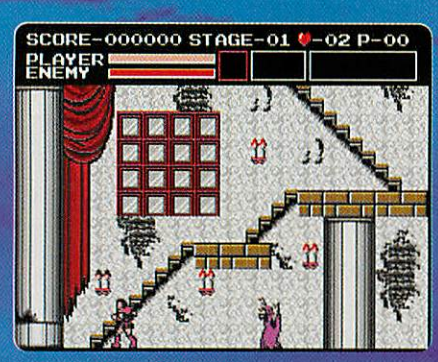
Cyborg dates from 1992, when it was an Archimedes game by Alpine Software. This is a straight re-release; it is now StrongARM and Risc PC-compatible, but plays in garish 256-colour video modes very reminiscent of the old A300 series. It mostly survives the experience of RISC OS 3.70, with the annoying exception of quitting very badly: The desktop is left in a clunky graphics mode and the Display Manager nobbled to offer only a strangely limited range of screen modes, as if something peculiar has happened to the monitor configuration file. I ended up having to reset the machine each time.

Cyborg comes with a little stapled 12-page booklet of notes and storyline. It's a game of two halves, an adventure game with some occasional pictures – as created by Alpine Software's ALPS tool – and then a sort of arcade game. The adventure is passable with some good moments, though not up to the standard of modern text games available free on the Internet; the arcade game is so difficult that I have yet to survive for more than 30 seconds. Motorbikes whizz by, in an unanimated fashion, while you have to shoot at them. Dead bikers become energy pods, useful since every shot costs you about five per cent of your life energy, as do the exploding bombs randomly dropped by the bikers (not aimed at you – there's little sense of being in the same landscape as the bikers).

I'm sorry to say that this is neither impressive to look at nor fun to play, and *Cyborg* does not cut the mustard by today's standards. There must be better games to revive than this.







Grasshopper's Games Suite

When I first reviewed this software, it was in a slightly early and rickety state, and I wasn't too impressed. A re-release has made noticeable improvements, and I'm glad to take this opportunity to say so. The aim of *Games Suite* is to make it possible for a programming novice to produce an action game with sound, graphics and a few frills, using no more than applications like *Paint* to design the sprites and a desktop interface to design the game itself.

Such a game won't, I think, reach commercial standards of quality – there is no substitute for expert machine-coding and professional graphic design, but it will get a good bit closer thanks to the newer features. There is better animation and "walkpath" editing (a walkpath is a monster's patrol route), more availability of RISC OS resources (sound samples, music, fonts), on-line help and so on. It all looks and feels much cleaner than release one, though some troubles remain. One example game (also much improved) runs way too fast on a StrongARM machine – the other, I couldn't get to work.

The remaining difficulty is that the documentation is still in need of a substantial rewrite, ideally by somebody other than the designer of the *Suite* who can look at the whole thing in the round. For example, there is no clear installation note, only a cryptic ReadMe file, which assumes you understand what *CFSReader* is, what it does and how to use it. I was stuck for half an hour on this. But I am beginning to think that if Grasshopper Software can only recruit more beta-testers – to evaluate and comment on the documentation as well as the game – and somebody to write a fresh manual from scratch, this could be a rather nice design tool after all. It is undoubtedly much better than it was.

Remember the MSX?

No, I didn't, either. It was a 1982 attempt at a world standard home computer – roughly, a Z80 processor, CP/M as operating system and graphics chips from the Texas Instruments TI 99/4. This chop suey was popular outside the English-speaking market, notably in Asia, South America and with the Soviet Ministry of Education; and a number of game cartridges were produced for it.

Inevitably there is now an emulator, *fMSX* by Marat Fayzullin, and it has been ported to RISC OS by David McEwen. As usual you need a fast Acorn to get a fair-speed MSX, but then it plays a very acceptable *Donkey Kong*, and it's a nice museum piece if nothing else. More details from Gareth Moore's excellent website at *http://www.doggysoft.co.uk/gaming/News2/Ems.html*

Product details

Product:	Cyborg (ProAction)
Price:	£13
Supplier:	R-Comp Interactive
Address:	22 Robert Moffat, High Legh, Knutsford, Cheshire, WA16 6PS Tel: 01925 755043
E-mail:	proaction@rcomp.co.uk
Pros:	Two games in one
Cons:	Garish, unattractive look • Very limited playability
Product:	Games Suite II
Supplier:	Grasshopper Software
Address:	6 Truro Close, East Leake LE12 HB
Price:	£25 inc. VAT
Pros:	Much improved since release one • A tool beginners can use
Cons:	Documentation poor • Could do with a little more testing

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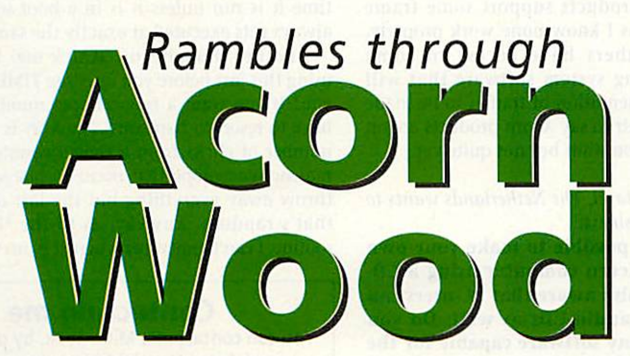
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Another question and answer session with **Mike Cook**

So many problems this month so let's get straight on with it.

There were several responses to Richard Grant's problem of wanting to port *!Draw* files across to PC as a scaleable vector file and there appear to be lots of solutions.

First up is Colin Sutton, a Lecturer & Consultant in Audio Visual & IT who came up with this:

I would suggest the use of *!Draw->WMF* v1.2 or later by Keith Sloan. It will simply and quickly convert *Draw* files to the WMF (Windows Metafile format) which can then be imported into most wordprocessors or graphics software on the PC with Windows 3.1 or Win95.

All conversions are done under RISC OS and files can be saved on a DOS formatted disc. Remember to add DOS file extension under RISC OS, e.g. filename: Circuit/wmf which when seen on the PC will appear as: CIRCUIT.WMF. *!Draw->WMF* is Careware from *Archive* mag/NCS but is also available for download from Arcade BBS. A similar utility from same author and called *!WMF-Draw* works the other way round to convert WMF vector files from the PC to our own scaleable *Draw* files.

This information was supplied by Robin Hounsome:

Like Richard Grant, I too use my Risc PC at home to produce work which will eventually be converted to PC format for final production. And, like Richard, I have tried many different ways to import Acorn *!Draw* vector graphics into a PC.

File conversion seemed the best option but I could not find any programs which provided the functionality I required. For a long time printing from the Acorn and then scanning into the PC was the only viable option. So at last autumn's Acorn World show I made a point of talking to as many developers as possible to see if this form of file conversion was under development.

A number said it was possible but not on their "To Do" list, others said "Watch This Space". What I should have done was visit the Sherston stand first. Sitting there in a dump bin was a program called *WMF IT* – a vector file converter program – and costing the princely sum of a fiver. It comes on two discs, one for the Acorn side and the other for the PC side. The Acorn program does the conversion and the PC program is a handy WMF viewer.

There are a few of limitations – system font text, text areas and bitmaps are not converted, any dashed lines are converted to continuous lines and arrow heads on the ends of lines are lost. Also some PC programs seem unable to handle some of the more complex shapes, but others are fine.

I currently use *Impression Style*, saving text in RTF format. Most bitmaps are retained as TIFF and with *!Draw* used for vector graphics. Once the *!Draw* files have been converted to WMF, these three file types can easily be placed into *PageMaker 6* for final production. Sherston also do a version to convert from *!Draw* to PICT for Apple users.

Chris Pitcher has the same solution but adds:

Even if grouped, all the objects go across ungrouped, but the whole picture box can be resized to fit with no problem. The tone of filled objects goes across perfectly and I have also had no problem with fonts, apart from system font which just doesn't work, but that is no loss. The text is presumably changed to path in the conversion process. Each letter is an individual part of the diagram, but if you Select the first letter and then Shift Select the others you can group the letters together and resize and reposition easily.

After the morass of the PC it's so refreshing to find a program which does what it's meant to do with no hassle, but this is one of the reasons why Acorns are not more popular. It's not macho to master an Acorn because everything works so easily and even novice users and females find them easy to use, so the techno-junkies in schools who increasingly make the purchasing decisions recommend the PC line. This is because it boosts their ego when they are the only ones who can get the infernal things to work (sometimes!).

Interestingly, my experience with RISC OS has meant I am much more intuitive with Windows 95 than my Windows 3.1/DOS based colleagues. This is something that Acorn should be pushing, because the transition to working in Windows 95 is so easy after using an Acorn. For example, you would be amazed how many 3.1 users do not know about shrinking windows to make them movable. Hope this is some use. Ho, hum back to the PC.

John Woodgate has a different solution he says:

I use *!Draw->CGM*, which is one of Keith Sloan's programs and used to be on a Norwich Careware disc. I don't know where it can be obtained now. You need to add the extension .CGM, either as /cgm in RISC OS (with only six characters in the filename) or on the IBM clone. *Word* will then convert the .CGM file to *Word* graphics format (about 10 times bigger file size!).

You need to play about with the font conversion tables which are explained in the *!Draw->CGM* documentation file. I say 'play around', because the process is buggy: The mapping isn't 1:1 and logical reasoning doesn't always work.

John Woodgate agrees with this method but adds:

Editing the font conversion table is described in the documentation of the companion *CGM->Draw* utility. *WordPerfect 5.1* and *Word 6* will then load the CGM files, as will several other IBM PC apps, although I found that an early version of *TurboCad* thinks the drawings are huge – about a metre square!

And finally David Madg has a completely different solution:

I have just been trying out the program *Xara Webster* using my PC Card, and I have found it will load Acorn *Draw* files, just give them the extension of .drw or .aff on the PC side.

Robin also has something to say on another point:

Regarding the letter concerning upgrading the Watford IDE drive from Mike Hambley, I think you may be confusing some of the terminology used in the letter. The Watford card is an IDE interface which allows a standard 2.5 inch IDE drive (with drive electronics) to be fitted to it. I have successfully carried out the upgrade which Mike describes although caution is required as the interface may not work with all drives. In my case I initially tried to add a second drive (there is space on the interface PCB to accept another connector) but I could not get the two drives to talk to each other, so I gave up with that idea and simply fitted the larger drive to the card in place of the old one.

David Thomson from the University of Glasgow has an alternative solution to that given in the February issue, on displaying those troublesome JPEG files. He says:

Use the program *!JPEGTrans* on the *Acorn User* CD number three. This does the business to change interlaced and progressive JPEGS into plain ones which *ChangeFSI* etc can understand. Alternatively, if you don't have the *WIMPBasic* modules (which *!JPEGTrans* requires to run), place the module 'JPEGtran' from the directory $.Gallery.Software.JPEGtrans.!JPEGtrans.JPEG, into the library. Then, after pressing F12 to enter the command line, type the following:

```
JPEGTran <inputfile> <outputfile>
```

where the correct substitutions for <input- and <output-file> have been made and the new file will be usable.

I get questions from many people, this is from an S Turnbull who works for a well-known computer magazine specialising in the products from a company called Acorn, he writes:

I want to run a computer during my sponsored cycle ride in Egypt, it will probably be either Psion or an A4. If it's an A4 then I may have a battery problem. What's the probability that a dynamo on the wheel could be used to charge a battery?

Not much chance, but Chris Bonnington takes a Mac up mountains and he uses a solar cell ➤

Rambles through

Acorn Wood

➤ recharger, specifically made for the job. That sounds a better bet. How about strapping it on your back?

Matthew Hammond is hoping to experiment with TV production, he writes:

I'm looking into generating video output from my Risc PC that is suitable for semi-professional television use. To this end, I have come across the problem that modes that interlace will always have an even number of lines – whereas PAL television requires 625 lines (alternating 312/313). My current plan is, on the VSYNC interrupt, to reprogram the 'Vertical Front Porch' register to achieve an alternating number of lines per field. However, I do not know where the VIDC20's control registers are.

I'm also somewhat unclear as to the status of the hardware memory protection when under interrupts, and how to, if necessary, turn it off. Lastly, related to this, when you turn on interlace through the OS (with *TV 0,0), what is actually happening to the video signal timings? I would be grateful if you could help with any of the points above.

Let's get this straight, a PAL TV does not give out alternate 312/313 line fields, each field is 312.5 lines long. It's the half line that makes the next frame interlace. What normally happens is that there is a counter counting down at twice the line frequency that gives a frame sync every 625 half lines.

When you turn the interlacing off you change this to an even number. However, as far as I know you can't coerce the Risc PC into giving you a standard 625 line TV signal, that's why you have to have a special monitor. I am sure if it were possible there would have been a monitor driver produced by now. Finally, we put the data sheet to the VIDC20 on the last cover CD, the chip itself is located at 53M in the memory map.

Bill Swanston not only comes up with the problem but also the solution, I like that:

I have an Epson Stylus Colour 200 inkjet printer – just seven months old. I went to replace the black cartridge which had run out. I followed the booklet instructions exactly but got an 'Ink Out' error. I thought perhaps I had a faulty cartridge so I bought and installed another one – not cheap! Same problem.

I phoned Epson's help line and the solution was simple. Switch on printer. Press LOAD/EJECT button to get cartridge to removal point. Lift up the grey lever as far as it will go (DO NOT TOUCH THE BLUE ONE) and immediately press it back down firmly. Press LOAD/EJECT again and the cartridge will be 'primed' properly. Voila – problem solved. This contradicts the booklet's advice by the way, so it's not something you would stumble across. Incidentally, how does an inkjet printer work?

By squirting ink through a column of small nozzles as the print head moves across the paper. There are mainly two ways to squirt the ink. The first one is to use a resistor to heat a small chamber. The air rapidly expands and pushes ink out of a small capillary tube.

The second way is used by Epson and that uses small piezo electric actuators to pump ink out of the tubes onto the passing paper. This cold method requires different inks and different paper, therefore if you are using an Epson printer don't be tempted to buy those coated papers that claim to be 'universal' as the quality will suffer badly.

Sheetal Dhanuka from The University of Cambridge has every computer users dream, a direct link into the Internet:

I have an Acorn A3000, and would like to link it to the Net. I have an Internet connection port in my room at University but this runs Macs and PCs. Can I hook my A3000 up to this. If I am able to link through this port what software/hardware do I need?

It is more than likely that the connection in your room is an ethernet socket, so first off you will need an ethernet card. However, the A3000 does not use the standard expansion socket so you might have to first get an external expander. As for the software, there are many solutions about, just look at the advertisements in this magazine.

One solution is the *AcornNet* Internet suite which can be fiddly to set up but it is free. Well at least it is ciderware, that is if you bump into the author, Philip Temple, in a pub you are obliged to buy him the best pint of cider in the house. We have several computers hooked up in my university like this and once running tend to be more reliable than the 'standard' PCs.

On a similar vein, Tomislav Simnett wants to surf the Web:

I am intending to get a modem for my SA110 RPC, but I need to know whether *ArcWeb* supports frames and Java. If not, then what does on the Acorn platform? I would like to know this as I have the *AcornNet* 0.20 program but would like to use it successfully.

Answering questions like this is like shooting at a moving target as by the time you read my reply things might have changed. At the moment there is no official support for Java although you can get a beta release of a Java interpreter if you are an Acorn Clan member.

The same sort of thing goes for frames. While a few commercial products support some frame commands, as far as I know none work properly. Again Clan members have access to some advanced operating system software that will allow a full implementation of frames to be made eventually. So it's fair to say Acorn products are on the brink of what you want but not quite yet.

Henk Huinen from Bavel, The Netherlands wants to go into the music business:

I know that it is possible to make your own CD-ROMs on an Acorn computer using a CD-writer, but I am also aware that PC-users can make their own audio CDs as well. Do you know if there is any software capable for the RISC OS platform that can do the same? I've got several hundreds of old records that probably won't ever be released on CD. I want to write them to CD so that I can play them on my audio CD-player.

Yes there is some software from Warm Silence Software that should allow you to do this, I remember seeing it at Acorn World last year. Incidentally what you are planning to do – making a copy of commercial music for your own use – is quite legal in your country, however for those in the UK, doing this will breach the copyright infringement act and as so will be illegal.

Now from C Bazley some advice for a previous writer:

In the February 1998 issue of *Acorn User* you printed a question from Mike Hambley about getting the keys in the *Starfighter 3000* demo working properly on a Risc PC. I don't have the demo, but the full game, and I eventually found out that the problem could be fixed in three ways.

- **Use the mouse instead. Since I got a Risc PC I have been using this control method and would never go back to the keyboard.**
- **You can redefine the 'thrust' key as 'ALT' instead of the space bar.**
- **Apparently someone has written a module that will substitute 'ALT' for the space bar in any Acorn game. Unfortunately I can't remember where you can get this from or who wrote it.**

If none of these things work in the demo version, I would advise Mike to buy the full version – well worth the money.

Robert Dean is searching for the Holy Grail:

I am currently seeking a true random number generator for my program library. I have found the 'RND()' function in BASIC nearly always returns the same number when an argument of 200 is used. The number only changes about once every few seconds or 1000 recursions of the call. Not very random! I do remember in the *INFO section in *Acorn User* a while back, a short routine was published that did just what I ask, but I can't find it!

At the risk of sounding like Victor Meldrew – I don't believe it – I tried RND(200) and got a different number every time. However, if you are looking for a true random number generator then forget it – there ain't no such thing. All computers programs produce pseudo random numbers, that is a predetermined sequence of numbers.

The trick in making them look random is to seed the generator with some unlikely to be repeated number, a good trick in BASIC is to use A% = RND(-TIME). As it's in centi-seconds it is unlikely to come up with the same sequence every time it is run unless it is in a boot sequence and always gets executed at exactly the same time.

Another thought just struck me. You are not using this just before you reset the TIME variable are you? If you want a true random number then you have to resort to hardware. One way is to count the number of clicks from a Geiger counter and some radioactive isotope that occur in one second. Then throw away everything but the last digit or two, that's random. Anyway, as to the *INFO routine, I can't remember where it is anyway. AU

Contacting me

You can contact me, Mike Cook, by post at the usual *Acorn User* address or by e-mail at: auqanda@idg.co.uk



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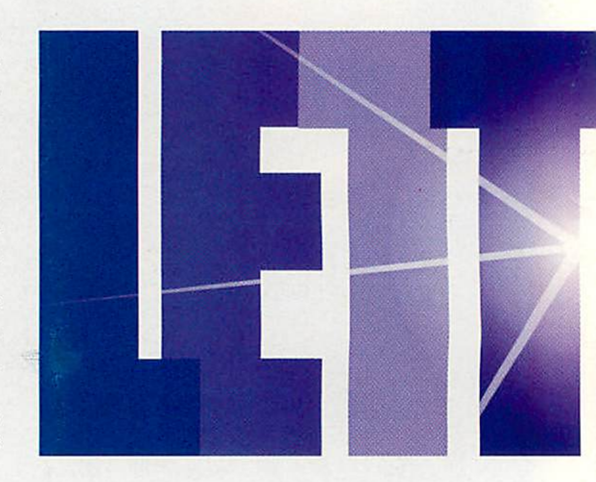
Sheep dip

Oh, what a depressing read was Nobilangelo Ceramalus' February 1998 article about Acorn's poor representation in New Zealand. It wasn't surprising, though. Except for an Apple laptop, our family has operated only Acorn computers here in NZ, starting with the BBC Model B in 1983 and continuing with the A3000 in 1992. The Beeb was hand-carried from England at half the local asking price, typical in NZ at the time, but we bought the A3000 here, and at the time it was the cheapest full-colour computer on the market. Both are robust machines (the Beeb still works), with a more stable operating system than either of the popular American competitors – and both have largely been supported quite successfully from the UK by mail-order, simply because Acorn dealers have always been as scarce as hens' teeth in New Zealand.

This household won't be put off Acorn by a lack of dealers here, but sadly the impending laptop purchases by my younger sons will be Apple due to lack of an up-to-date Acorn one – I flatly refuse to housekeep a Microsoft system for them – too difficult. However, even on the desktop where there are good offerings, to stay with Acorn here does require considerable dedication due to the lack of local support, so the sorry Samcor saga is seriously bad news.

One is left wondering whether Samcor would prefer to see Acorn out of the market – after all, it must be galling enough for a PC vendor to have to battle with quite a successful Apple in the education market, without having to fight Acorn's superior products as well. Let's hope Mr Pinchard's December visit here did some good – I'm not holding my breath, though.

Michael Poole
pooleprm@kapiti.co.nz



More Doom?

In your review of Drifter, the reviewer warned that it didn't run well on an A5000. Personally, I was disgusted that it had taken six years for a game to be developed that actually taxes the power of an ARM 3! I believe that an Acorn games renaissance will take place this year, driven by games like BHP, Exodus, Doom, Quake, Ankh, TEK, and Destiny.

The fact is, that Acorn magazines look like boring publications about educational computers, whereas PC magazines have stunning screenshots of the latest games with exciting headlines on their covers. Look in your local newsagents – I understand that Acorn User isn't a games magazine (and by the way, why aren't there any?) but honestly, a cover picture of a

Software development

A recurring contentious note in the Acorn world is the lack of support for products – I wonder if the people who have actually been in charge of product management for products that have disappeared or have now ceased to be supported would like to reveal the reasons themselves?

Some software developers, Computer Concepts being the obvious top-of-the-list candidate, seem to be well placed to provide indefinite support for their products, *Impression* and *ArtWorks*, but have chosen not to. Their ability to provide long-term support comes from their 'organisation' approach and the (apparent) fact that the products do not depend on a single programmer, so development can be passed on.

But what will happen to *Ovation Pro* when David Pilling retires? Who will take up the *Sibelius 7* mantle when the Finn brothers buy their island retreat? When Dominic Symes (et al) is finally seconded to NASA, who will revise *Zap* for the next generations of Risc PCs? When John Skingley finally decides to take some time for himself, who will look after his *Impact Professional* legacy and nurse it through Acorn's version of the Millennium bug in the year 2048?

All those software titles have people's names firmly attached – they are as craftsmen who made wagon wheels and whose spoke-work is recognised at 20 paces. But dirt-tracks gave way to tarmac roads but when the original craftsmen have left the scene, their work gets left behind too, their customers instead searching out a brand new pneumatic replacement for their spoked wheel, from a new craftsman.

The point I'm making here is that when the computing environment changes the new software copes perfectly – but the old software becomes redundant along with all its files and formats. I want to avoid owning that 'redundant' software, which is why I have felt confident with *Impression* for so many years – there was the support which belonged to the company, not a single person with career moves ahead. And it has worked for both CC and their 'installed user base': When StrongARM appeared, so did the *Impression* upgrade to cope with it. Despite there being little competitive development of the software in other areas, it is still a very viable product.

I have just bought *Ovation Pro*, because I have no option. I use large complex relational databases (*Impact*) with *Impression* now, and *Impression* is holding back the database software. Although *Ovation Pro* cannot yet replace *Impression* for that particular purpose, it will – but for how long?

I don't mean that in a negative way, I mean it as a sincere question: Changing over from *Impression* to *Ovation Pro* is a lot of work, mainly because of my existing stock of *Impression* templates that need replicating in *Ovation Pro* with no way of automating it: invoices, stationery, label sheets, report sheets and much more all have to be meticulously re-designed. My confidence in any product is going to be heightened by any Software Company who says "Buy this software and you'll use it forever because it will always be current".

So, please, let's hear it. I want Beebug to boost our confidence in *Ovation Pro* by telling us what plans and forethought they have put into ensuring that even when David Pilling is no longer available *Ovation Pro* will still be up-to-scratch. I would like Longman Logotron to tell us for certain that *Eureka* is not shelved, and that there are many ways in which it can continue to serve through future planned developments. I need Circle Software to say that when Movie is a common data type along with number, text, date, time, and calc, *Impact* will have a field type of Movie, where 'Rocky 46' can be stored!

I want to know that software developers have thought about the future continued development of their product because I need that information to help me decide to buy it; please do not keep these plans so secret, or dismiss them as less important than having a currently working product. What are we all thinking when we buy pre-release software? We must be buying it because we expect more development.

Brian O'Carroll
Aylesbury, Bucks





barcode one month before the scheduled release of Doom for the Acorn? Who is likely to find a barcode exciting?

Do you realise that *Quake* was hyped in PC magazines for over a year before it came out, with previews, reviews and screenshots? Obviously I don't expect this level of coverage for the Acorn version, but please try to do better than a certain other Acorn magazine, which recently published a single page review of *BHP* with most of this taken up by one screenshot.

The Acorn games market needs your support. *Doom* is probably the best game ever, and Acorn games players have been waiting for it since *Wolfenstein* was released. Let's have decent-sized reviews of these games (at least two pages) that do them credit. Alternatively, how about a bi-monthly sister magazine 'Acorn Gamer'?

Finally, despite all my criticism, *Acorn User* is, in my opinion, the best non-subscription Acorn magazine. Full marks for the review of *Drifter*, although a bit short, and the series on creating 3D games.

Chris Bazley
C.Bazley@Pemail.net

There was an attempt to produce an Acorn games magazine by another company a couple of years back, it failed utterly – at present and, for the foreseeable future, there just isn't sufficient reader interest or advertising revenue to make it work. When there is you can be sure someone will take advantage of it.

I think you'll you be happy with the games coverage coming up in Acorn User.

The Southwest Show



As organiser of the Acorn Southwest Show, I'd like to take this opportunity to pass on a few comments about it, now the dust has settled.

The show, which took place at the Webbington Hotel near Bristol on Saturday 7 February, proved to be very successful with people coming from as far as Harrogate, Bedford and Birmingham. There was a very enthusiastic atmosphere, which made me believe that the Acorn scene is very much alive. The most popular event of the day being the talk by Acorn's Chris Cox, which generated a lot of positive feeling for the future.

Besides the sound of cash registers doing good business, I couldn't help but notice that everybody felt relaxed and willing to talk, under no pressure to sell or buy. It reminded me of the hobbyist computer shows I used to attend in the '80s.

There's no doubt in my mind, that Acorn users in South England and South Wales did themselves proud, and it is my intention to support them with their own regional show next year. Also, a big thanks to all the exhibitors for coming along and supporting the event.

Finally, I'd like to take the opportunity to thank members of the Bristol Acorn User Group who helped ensure that the show ran smoothly. I couldn't have run the show without your help. You can view some pictures taken of the show, by pointing your Web browser in the direction of http://www.argonet.co.uk/acornshow/southwest

John Stonier
Show Organiser

Free e-mail

After reading the News article about "Free e-mail for life" in the February issue, I went to Digital Mail Limited's website at www.digitalmail.com and registered e-mail addresses for my family. I also registered for the 14 day trial of their full Digital Mail box service for Fax, Vox and Net. I was sent a London 0171 phone number, Personal Identification number and an e-mail address.

I tested it out by faxing to the new telephone number. My first attempt was not received as an e-mail in MIME format that my ANT Internet Suite understood, so I called their very helpful and knowledgeable support person – he did know about Acorns so just a quick explanation about the system was needed. The next test e-mailed the fax image as a DCX PC Graphics program image that I could not view correctly.

After sending an e-mail containing a list of bitmap files I could view, the system was altered and now it works fine with a standard PCX file which could be viewed by *ImageFS* or PD software. Digital Mail's support team have retained all my setup information so that it should cut down on set up time for others, this is as long as you inform them that you are an Acorn user.

I was also trying to get voice messages working but I needed a RealAudio player and understand that Warm Silence Software are working on one, so I will have to wait until then to try that out. As I work from home I have two phone lines one for normal incoming phone calls the other for the fax/modem and outgoing calls. There are many good points to using this Digital Mail service but here are mine:

• I do not need to leave my fax/modem and computer on just for that odd late night fax message
• I no longer lose that fax message while I am connected to the Internet
• As I do not own a scanner my wife can fax me any low resolution pic that I may wish to use

Digital Mail's Support team should be given the pat on the back this month in my opinion.

By the way, another company who deserve some praise are Digital Aviation (E-mail: 100534.2324@compuserve.com, tel: 01637 851444) who changed their Light Aircraft Simulator PRO so that PC card users can run their software. This is for DOS or Win 95 and is currently at version 5.1.

Paul C Robinson
Paul@havaccnt.demon.co.uk

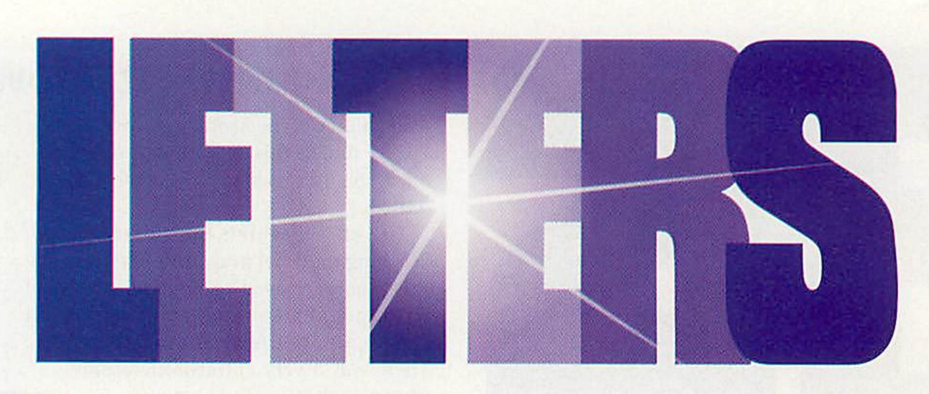
WSS have produced a RealAudio player for the NC but it relies heavily on the floating point unit in the ARM7500. It is not clear at present whether a player will appear for other Acorn machines. ➤

Air your views

If there's something you want to 'get off your chest' or you have some interesting information for your fellow *Acorn User* readers, then write in to:
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Duplicate info

With regard to Richard Sage's letter in the February issue, I thought you might be interested to hear that I also wrote to Tony Blair to voice my concerns about his meeting with Bill Gates, as well as to show my support for Acorn and stating similar facts about Acorn's education heritage and Britishness. I received exactly the same reply from the government, along with the lavishly printed *National Grid for Learning* document. I wonder how many other similar letters were sent to Mr Blair, and how many of them were from Acorn devotees?

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I am sure we would like the government to provide funding for Acorn, Xemplar etc and to endorse RISC OS, NCs etc. for their suitability in education. Of course, it would be difficult for the government to support Acorn to this extent, as there are obviously other British companies out there selling PC and Mac hardware and software.

I recently looked through a *Times Educational Supplement* and was fairly shocked at the lack of weight Acorn now seem to carry in education. Reviews of CD-ROMs were mostly for PC or Mac, and one article about Web browsing stated that, although there are good browsers for the Acorn platform, 'the facilities are always likely to be one step behind', and that Acorn and third-party developers 'simply do not have the resources such as Microsoft or Netscape'.

As the Internet seems to be the way forward for computers in education, it seems to me that Acorn somehow need to find a way to remain bang up-to-date, in order that they can provide a truly viable alternative to PCs and Macs. I hoped that Acorn's NC design might be the answer to this, with spin-offs for RISC OS machines, Perhaps the newly re-launched *Acornsoft* will address this problem. One thing that Microsoft do well is to provide packaged software with which many IT users and buyers can remain up-to-date and not get left behind. I would suggest that Acorn/Acornsoft need to provide similar software solutions which would surely make the purchasing of Acorn hardware more attractive.

Daniel Salter
Southwell, Notts

Re: Colour is better than mono

I was fascinated to read your news editorial in March's *Acorn User* on the subject of colour printers, specifically the Tektronix Phaser. Curiously I had had a good look at this printer and come to the conclusion that it was not fit for my purpose.

Admittedly my purpose was that of printing proofs for packaging designs – not quite the output of a busy office. Further I was looking for an A3 colour printer and not an A4 one.

At first sight the Tektronix Phaser seemed a good buy. It was not massively expensive compared to the opposition, dye sublimated or laser colour printers and, at four or five minutes for an A3 sheet (at 300x300dpi), it was fast enough. Compared to some other, more expensive printers, the quality was not brilliant and there was the waxy feel to the printed page, which I suspected would deteriorate with time and storage. The ink cost of 50p per A3 sheet was not unreasonable for my relatively low throughput of 1,000 or so prints per annum.

But then I was introduced to the Canon range. It printed at much the same speed and could go faster for a lower definition. But the striking things were the much higher definition and the sheer brilliance of the result, on the right sort of paper.

The cost of the ink plus special paper was slightly more expensive per copy, but the real difference was in the price. Instead of paying £3,000 for the Tektronix printer, we had to pay only about £800 for the Canon 1550 which would even print on A2 paper if needed. The capital saving more than paid for the increased operating cost even over a five-year period. Everyone who saw the results said it was a no-brainer, the Canon was vastly superior.

Your example was for an office printing 2,000 pages a month. It may well be that the Tektronix had some cost benefits for this throughput. But I suspect that the majority of your readers are on a far lower throughput and would almost invariably choose a colour ink-jet printer for the cheapness of purchase price and the superb quality of output.

Tim Powys-Lybbe
Windsor, Berks
tim@southfrm.demon.co.uk

It's a matter of horses and courses, but we are in the process of putting a range of colour printers through the mill and will be reporting on the results in a forthcoming issue.

The Regan Files (March)

I fully agree with this article and its comment about the power of computers today. I started with National Semiconductors SC/MP development kit back in 1975.

Code entry was via a hexadecimal keypad with an 8-digit 7-segment display. A large RAM memory 256-bytes, of which the 512-byte ROM-based operating system clawed back 32-bytes for its own use. I managed to make this system play tunes using a radio tuned to 1.0 Megahertz, scroll messages using such letters that could be displayed by a 7-segment display and control the speed and direction of a DC motor.

Later in 1977 I upgraded to a massive 1 Kilobyte of RAM, an 8-bit I/O port, Tiny BASIC complete with 11 instructions, and a tape software saving and retrieval system. Now the all-singing all-dancing kit could be used for more useful work, like designing a better operating system.

Bob Ord
Whickham, Newcastle-upon-Tyne
E-mail: wrod@argonet.co.uk

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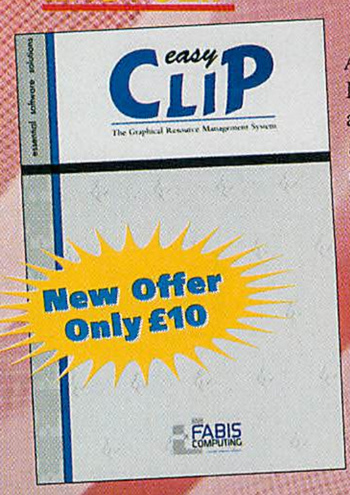
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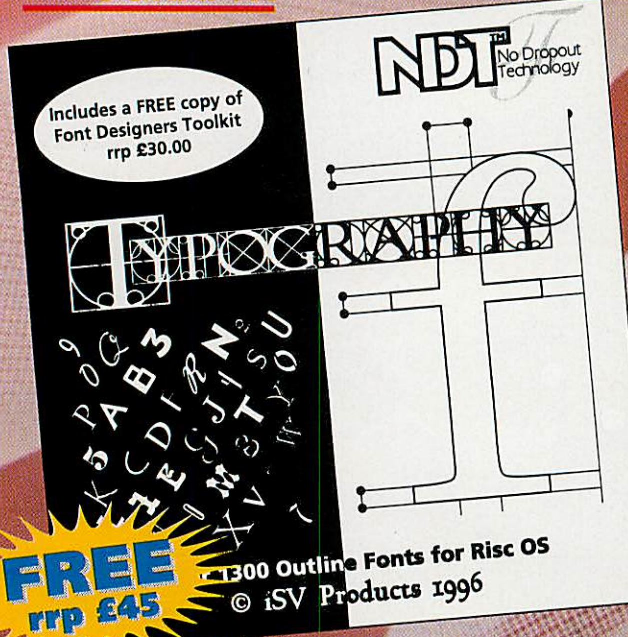
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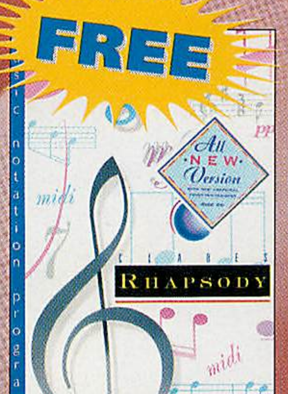
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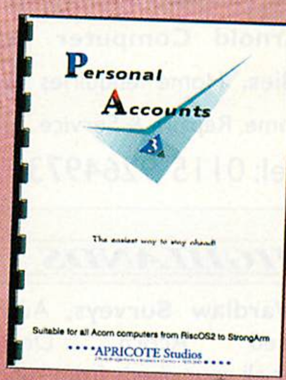
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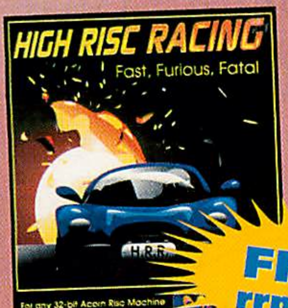
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Simon Parsonage is trying to convince me that keyboards are interesting. I'm a little sceptical about this, but he's actually making a reasonable case.

'Keyboards are important: They are, after all, one of the few ways of communicating with your computer, and for some are the *only* way of communicating to others. They should be fun things (look at our new green keyboard) as well as enabling (you should see our new infra-red keyboard).'

Simon Parsonage is the new managing director of the Concept Keyboard Company, which is in his words: 'A design and manufacturing company. We come up with ideas for products for use with membranes and electronics and then look to fit them to things, whether it be an industrial or educational use.'

The Concept Keyboard Company was originally an industrial company, but about 15 years ago they, by chance, got into the education and special needs field.

'The story goes,' says Simon, 'that we were producing an industrial keyboard for a company and the person who was overseeing its production had a disabled daughter. He saw the potential of the industrial keyboard for his daughter who had very little motor control. By pressing a little membrane on an overlay keyboard she could access the computer.

'From then on we really got involved in special needs and education. At its peak we were selling 15,000 Concepts a year, mainly to the Acorn platform. It has levelled out, but it is still very healthy.

'Acorn is still very important to Concept. There is a very strong affinity with Acorns. This is mainly because of the history; the two have grown up together. Hugh Symons – our parent company – were at one time Acorn's sole distributor, this was before Acorn decided they would sell direct. At this time Acorn were far ahead of anyone else.

'It is unfortunate that what is turning up in the marketplace is not always the best but the one that is most hyped and has had the marketing power behind it. Traditionally the best software for our keyboards is with the Acorn market. It has far wider variety and better quality.'

After flirting with the idea of becoming a lawyer, Simon decided it was too boring and read accountancy at university. Or, as he puts it, he 'maximised the benefits of the university system while ensuring my degree'. He started as a chartered accountant with one of the top accountants in the country, which involved him auditing 'big' companies and gave him lots of experience.

'Traditionally the best software for our keyboards is with the Acorn market'

One day a client of his told him they were looking for a financial controller. Naively, Simon asked what sort of person they were looking for, and the client replied: 'We're actually looking for someone who is wearing a brown suit,' which was, as it happened, the colour of suit that Simon was wearing. Simon's career continued the upward climb and he became their financial director. 'At the time we were looking at various projects, which involved getting external finance. One of the things we needed was to get the bank's support in the short-term while we got the deal into place.

'One of our major backers at the time was Virgin. I had been informed by one of the co-directors that Richard Branson was willing to talk to the bank manager, and he gave us his telephone number.

We went to discuss things with the regional manager of a commercial bank. The bank manager was not convinced, so we gave him the telephone number. The bank manager phoned up and said: 'Who am I speaking to?' The look on the bank manager's face was a delight to see, as he then had to say: 'Good morning, Mr Branson'.

Simon then had enough experience behind him to be a freelance consultant. It was through this he met the Concept Keyboard Company who snapped him up quickly as their financial director.

When you are living a managing director's lifestyle of working six to seven days a week and at least 12 hours a day then occasionally you need something that is 'escapist'.

'I wanted to do something completely different' grins Simon. 'I saw this advert for an aromatherapy course. I thought that this is completely and utterly different from accounting and cash flow. I ended up on an aromatherapy course every weekend for about ten weeks. It involved everything: Reflexology, understanding how oils work and basic massage technique.

'Aromatherapy definitely works. It is whole body healing. It is the kind of thing that in today's high powered highly stressed world you miss out on. I have learned that you have to take proper holidays and look after yourself.'

Jill Regan AU

New Lowest Ever RiscPC Prices!

Prices in RED show recent reductions

RiscPCs from £ 899 !!

StrongArm

The Pineapple HighSpec RiscPC - Special limited period offer

StrongARM 233Mhz processor, x8 speed CD, 36Mb Simm, 2Mb Vram, 4.3Gb HD, 586-100 PC Card, PCPro + PCExchange, Windows95, 15" Digital Monitor, 120w Speakers. This offer still qualifies for the FREE copy of Studio24 v1 and one years FREE membership of the Virus Protection Scheme. Total cost £1699 inc vat and delivery to mainland UK. With 20:20 finance (subject to status) this is £699 deposit and 20 monthly payments of £50

Please ask if you wish to alter or upgrade this specification still further

StrongARM RiscPC (233Mhz) (4Mb 1.2Gb HD) Base Price - £ 899 inc vat (with free x8 CD)

If you don't need the full HighSpec computer, just choose the required upgrades shown below and add to the base price.

General Upgrades

CDRoms - (when bought with a RiscPC)

x8 speed CDRom	£ 50.00
x24 speed CDRom	£ 75.00

Harddrives - (exchange for RiscPC 1.2Gb HD)

1.7Gb Harddrive	£ 85.00
2.0Gb Harddrive	£ 95.00
2.5Gb Harddrive	£ 105.00
4.3Gb Harddrive	£ 169.00

Other sizes available - please ask

Backplanes

2 slot backplane	£ 34.00
2nd Slice (inc 4 slot backplane)	£ 89.00

RiscPC Memory

1Mb VRam	£ 69.00
2Mb VRam	£ 89.00
8Mb SIMM	£ 19.00
16Mb SIMM	£ 35.00
32Mb SIMM	£ 65.00

Other sizes available - please ask

PC Cards & Software

DX4-100 PC Card	£ 229.00
586-100 (Acorn) PC Card	£ 329.00
586-133 (CJE) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
Windows 95 (Installed for you)	£ 79.00

Monitors

Acorn 14" AKF60	£ 264.00
Acorn 17" AKF92	£ 639.00
Iiyama 17" 8617T	£ 433.00
Iiyama 17" 9017T Pro	£ 469.00
CTX mons have 3 year (1 on site) warnty)	
CTX 14"	£ 169.00
CTX 15"	£ 259.00
CTX 17" .26 92Khz Digital	£ 399.00

Internet

33,600 Ext Voice Modem BABT	£75.00
56,000 Flex AND x2 !!	£99.00
Ant Internet Suite software	£116.33

Pineapple Computer Offers

Special Pineapple Computer Hardware deals!

Even with the new low RiscPC prices Pineapple are still prepared to offer a FREE x8 speed CDRom drive with any RiscPC purchase. See above for the special deal on our HighSpec RiscPC model.

Pineapple FREE software

With every new RiscPC you receive -
1 year subscription to the Virus Scheme.
Studio24 v1 Art & photo-retouch software.



20:20 Finance available on all RiscPCs (subject to status). 20% deposit and 20 monthly payments at 0%



Flatbed Colour Scanners

There are now a growing number of scanners which will work on RiscOS. Most of these need a SCSI interface though, so the Epson GT5000 parallel is still our most popular model.
All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI connecting cable.

Epson GT5000 parallel	£259.00
Epson GT5500 SCSI	£329.00
Epson GT8500 par&SCSI	£399.00
Epson GT9500 par&SCSI	£519.00

Coming soon - New low cost parallel port scanner for Acorn computers - please ask about availability!!

SCSI Cards & Cables

Cumana SCSI II Card	£175.00
EESOX SCSI II Card	£145.00
50 mini 'D' to 50 Centronics	£19.00
50 mini 'D' to 25 'D' plug	£19.00
25 'D' plug to 50 Centronics	£16.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
Parallel 4 way	£19.99
25 'D' plug to 25 'D' plug	£4.99
25 'D' plug to 36 Centronics	£4.99
Monitor+Keyboard 2 way	£17.99
15way HD to 15way HD cable	£4.99
Male-male mini DIN keybrd cab	£3.00
Mini DIN to 5 pin keybrd adptr	£1.50
5 pin DIN to 5 pin DIN keybrd	£2.50

Many other types also available please ask



Hard Drives

Pineapples removable drive system is available for IDE and SCSI systems.

IDE removable system	£19.00
SCSI removable system	£25.00
IDE or SCSI cable	£5.00

Bare IDE harddrives

1.7Gb IDE	£115.00
2.0Gb IDE	£125.00
2.5Gb IDE	£135.00
3.2Gb IDE	£159.00
4.3Gb IDE (Fireball ST)	£199.00
4.3Gb IDE (Cyclone 5.25")	£189.00
6,4Gb IDE	£245.00

IDE Expansion

x4 IDE Expansion card	£69.00

Bare SCSI harddrives

2.0Gb SCSI	£189.00
3.2Gb SCSI (Quantum ST)	£199.00
4.2Gb SCSI	£239.00
6.4Gb SCSI	£299.00

ZIP parallel port drives

Iomega parallel port ZIP drive	£149.00
Iomega SCSI internal ZIP	£129.00
100Mb ZIP cartridge	£13.50
Pack of 6 Zip Cartridges	£75.00



Studio24Pro

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'- *Acorn User Mar96*

Now just ⋆ £99.00 ⋆

Users note FREE update v2.16 is now available.



PAL TV Coders

We have a range of PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. All models have S-VHS as well as standard video outputs. All except PLC/4 work in VGA and SVGA screen modes. Please ask for more info.

VGA Converter PAL Coder	£159.00
AVK/3 PAL Coder	£259.00
PLC/4 PAL Coder (mode 12,15)	£99.00

for A3020,A4000,A5000,RiscPC

Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.

Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple Software can help you with ALL your Acorn computer related problems.



Colour Printers

Canon BJC80 - portable col	£233.00
Canon BJC250	£149.00
Canon BJC620 - colour	£229.00
Canon BJC4300	£198.00
Canon BJC4550 (A3)	£287.00
Canon BJC5500 (A2)	£649.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 400	£169.00
Epson Stylus Colour 600	£209.00
Epson Stylus Colour 800	£269.00
Epson Stylus Colour 1520 (A3)	£729.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 6L (laser mono)	£299.00

Other Items

RiscOS3 PRM vols 1-4	£99.95
RiscOS3.6 PRM vol 5a	£29.75
Casio QV11 Digital Camera	£376.00
Casio QV100 Digital Camera	£528.00
Sibelius Junior v3.0	£55.00
Sibelius 6 software v3.5	£115.00
Sibelius 7 Student v3.5	£459.00
Sibelius 7 software v3.5	£940.00
Studio24 version 1	£35.00
Acorn Netstation (Ethernet)	£467.00
Acorn Netstation (Modem)	£467.00
A7000 upgrade to A7000+	£249.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

Pineapple Software

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Essex IG3 9JS

Tel 0181 599 1476 Fax 0181 598 2343

email:- sales@pineaple.demon.co.uk

www:- http://www.pineaple.demon.co.uk

Terms:- All prices *include* 17.5% vat. Carriage £15 on computer systems. £5 on all other hardware. Other items free. Phone for quote outside UK.Official orders, cheques and all major credit cards accepted at no extra charge.

'Pineapple offer some of the finest and friendliest after sales support you will find' - Acorn User Mar 96

Why not come and visit us (easy parking) where you can see most of the Acorn range of computers and other hardware in action. Monday - Saturday 0900 - 1730





DUE 16/17 MAY

Wakefield Spring Show
16/17 May 1998

Acorn